



RF TEST REPORT

Report No.: SET2019-12046

Product Name: Overhead projector

FCC ID: X3XL-12W

IC: 8804A- L12W

Model No. : L-12W

Applicant: ELMO Company, Limited

Address: 1-3-4, Shioya-cho, Minami-ku, Nagoya-city Aichi,
457-0078, Japan.

Dates of Testing: 08/26/2019 — 09/11/2019

Issued by: CCIC Southern Electronic Product Testing (Shenzhen) Co.,
Ltd.

Lab Location: Building 28/29, East of Shigu, Xili Industrial Zone, Xili Road,
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Test Report

Product Name : Overhead projector

Brand Name : ELMO

Trade Name : ELMO

Applicant : ELMO Company, Limited

Applicant Address : 1-3-4, Shioya-cho, Minami-ku, Nagoya-city Aichi,
457-0078, Japan.

Manufacturer : ELMO Company, Limited

Manufacturer Address : 1-3-4, Shioya-cho, Minami-ku, Nagoya-city Aichi,
457-0078, Japan.

Test Standards : 47 CFR Part 15 Subpart E

Test Result : PASS

Tested by :

2019.09.26

Shallwe Yang, Test Engineer

Reviewed by :

2019.09.26

Chris You, Senior Engineer

Approved by :

2019.09.26

Shuangwen Zhang, Manager

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Change History		
Issue	Date	Reason for change
1.0	2019.09.26	First edition

1. General Information

1.1. EUT Description

EUT Type	Overhead projector
Hardware Version	RA
Software Version	0.6.4
EUT supports Radios application	WLAN5.0GHz 802.11a/n (HT20/40)
Product Type	Indoor
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM,16QAM, QPSK, BPSK for OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6 Mbps 802.11n : up to 135 Mbps
Frequency Range	Band UNII-1: 5150 ~ 5250MHz Band UNII-2A: 5250 ~ 5350MHz Band UNII-2C: 5470 ~ 5725MHz
Channel Bandwidth	802.11a: 20MHz 802.11n: 20MHz/40MHz
Channel Number	5150 MHz ~ 5250MHz: 4 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 5250 MHz ~ 5350MHz: 4 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 5470 MHz ~ 5725MHz: 11 for 802.11a, 802.11n (HT20) 5 for 802.11n (HT40)
Antenna Type	Internal
Antenna Gain	Band 1: 4.09dBi Band 2A: 4.81dBi Band 2C: 5.41dBi
Output Power (Max.)	Band UNII-1: 16.50 dBm Band UNII-2A: 16.31 dBm Band UNII-2C: 16.35dBm

1.2. Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart E for the EUT FCC Certification:

Test detailed items/section required by FCC rules, and results are as below:

No.	FCC Rule	Description	Result
1	15.203	Antenna Requirement	PASS
2	15.407(a)	Maximum Conducted Output Power	PASS
3	15.407(a)	Emission Bandwidth(26 dB Bandwidth)	PASS
	15.407(e)	Emission Bandwidth(6 dB Bandwidth)	PASS
	-	Emission Bandwidth(99%)	PASS
4	15.407(a)	Power spectral density (PSD)	PASS
5	15.207	AC Power Line Conducted Emission	PASS
6	15.209 15.407(b)	Radiated Band Edges and Spurious Emission	PASS
7	15.407(g)	Frequency Stability	PASS

1.3. Channel List

Operated band in 5150 MHz ~ 5250MHz

4 channels are provided for 802.11a, 802.11n-HT20

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

2 channels are provided for 802.11n-HT40

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

Operated band in 5250 MHz ~ 5350MHz

4 channels are provided for 802.11a, 802.11n-HT20

Channel	Frequency	Channel	Frequency
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

2 channels are provided for 802.11n-HT40

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

Operated band in 5470 MHz ~ 5725MHz

11 channels are provided for 802.11a, 802.11n-HT20

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz		

5 channels are provided for 802.11n-HT40

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz		

1.4. Test environment and mode

Operating Environment	
Temperature	24°C
Humidity	57 % RH
Atmospheric Pressure	1010 mbar
Test mode:	
Continuously transmitting mode	Keeps the EUT in 100% duty cycle transmitting with modulation in SISO, duty cycle factor is not required.

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

For Frequency band 5150 ~ 5250 MHz			
Mode	Modulation scheme / bandwidth		
	5180 MHz	5220 MHz	5240 MHz
802.11a	6 Mbps	6 Mbps	6 Mbps
802.11n – HT20	MCS 0	MCS 0	MCS 0
Frequency	5190 MHz		5230 MHz
802.11n – HT40	MCS 0		MCS 0
For Frequency band 5250 ~ 5350 MHz			
Mode	Modulation scheme / bandwidth		
	5260 MHz	5300 MHz	5320 MHz
802.11a	6 Mbps	6 Mbps	6 Mbps
802.11n – HT20	MCS 0	MCS 0	MCS 0
Frequency	5270 MHz		5310 MHz
802.11n – HT40	MCS 0		MCS 0
For Frequency band 5470 ~ 5725 MHz			
Mode	Modulation scheme / bandwidth		
	5500 MHz	5580 MHz	5700 MHz
802.11a	6 Mbps	6 Mbps	6 Mbps
802.11n – HT20	MCS 0	MCS 0	MCS 0
Frequency	5510 MHz		5670 MHz
802.11n – HT40	MCS 0		MCS 0

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation modes or test configuration modes mentioned above was evaluated respectively.

Pretest Test Mode	Description
Mode 1	TX A Mode / CH36, CH44, CH48 (UNII-1)
Mode 2	TX N20 Mode / CH36, CH44, CH48 (UNII-1)
Mode 3	TX N40 Mode / CH38, CH46 (UNII-1)
Mode 4	TX A Mode / CH52, CH60, CH64 (UNII-2A)
Mode 5	TX N20 Mode / CH52, CH60, CH64 (UNII-2A)
Mode 6	TX N40 Mode / CH54, CH62 (UNII-2A)
Mode 7	TX A Mode / CH100, CH116, CH140 (UNII-2C)
Mode 8	TX N20 Mode / CH100, CH116, CH140 (UNII-2C)
Mode 9	TX N40 Mode / CH102, CH134 (UNII-2C)
Mode 10	TX Mode

The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

For Conducted Test	
Final Test Mode	Description
Mode 11	TX Mode
For Radiated Test	
Final Test Mode	Description
Mode 1	TX A Mode / CH36, CH44, CH48 (UNII-1)
Mode 2	TX N20 Mode / CH36, CH44, CH48 (UNII-1)
Mode 3	TX N40 Mode / CH38, CH46 (UNII-1)
Mode 4	TX A Mode / CH52, CH60, CH64 (UNII-2A)
Mode 5	TX N20 Mode / CH52, CH60, CH64 (UNII-2A)
Mode 6	TX N40 Mode / CH54, CH62 (UNII-2A)
Mode 7	TX A Mode / CH100, CH116, CH140 (UNII-2C)
Mode 8	TX N20 Mode / CH100, CH116, CH140 (UNII-2C)
Mode 9	TX N40 Mode / CH102, CH134 (UNII-2C)

1.5. Power level setup in software

Power level setup in software for 5G wifi			
UNII-1			
Frequency (MHz)	5180	5220	5240
A mode	19	19	19
Frequency (MHz)	5180	5220	5240
N20 mode	15	15	15
Frequency (MHz)	5190	5230	\
N40 mode	15	15	\

Power level setup in software for 5G wifi			
UNII-2A			
Frequency (MHz)	5260	5300	5320
A mode	19	19	19
Frequency (MHz)	5260	5300	5320
N20 mode	15	15	15
Frequency (MHz)	5270	5310	\
N40 mode	15	15	\

Power level setup in software for 5G wifi			
UNII-2C			
Frequency (MHz)	5500	5580	5700
A mode	19	19	19
Frequency (MHz)	5500	5580	5700
N20 mode	15	15	15
Frequency (MHz)	5510	5670	\
N40 mode	15	15	\

1.6. Laboratory Facilities

FCC-Registration No.: CN5031

CCIC Southern Electronic Product Testing (Shenzhen) Co., Ltd. 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. Designation Number: CN5031, valid time is until December 31, 2019.

ISED Registration: 11185A-1

CAB identifier: CN0064

CCIC Southern Electronic Product Testing (Shenzhen) Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A-1 on Aug. 04, 2016, valid time is until Dec. 03, 2019.

NVLAP Lab Code: 201008-0

CCIC-SET is a third party testing organization accredited by NVLAP according to ISO/IEC 17025. The accreditation certificate number is 201008-0.

2. 47 CFR Part 15E Requirements

2.1. Antenna requirement

2.1.1. Applicable Standard

According to FCC 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

And according to FCC 47 CFR Section 15.407(E), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

2.1.2. Antenna Information

Antenna Type	Internal antenna
Max. Antenna Gain	5.41dBi

2.1.3. Result: comply

The EUT has a permanently and irreplaceable attached antenna. Please refer to the EUT internal photos.

2.2. Output Power

2.2.1. Limit of Output Power

FCC 15.407(a)

The maximum conducted output power should not exceed:

Band	EUT Category	Limit
U-NII-1	☐ Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p. $\leq$ 125mW(21dBm) at any elevation angle above 30 degrees as measured from the horizon)
	☐ Fixed point-to-point Access device	1 Watt (30 dBm)
	☐ Indoor Access Point	1 Watt (30 dBm)
	☒ Mobile and portable client device	250mW (24 dBm)
U-NII-2A	☒	250mW (24 dBm) or 11dBm+10logB* Whichever is less.
U-NII-2C	☒	250mW (24 dBm) or 11dBm+10logB* Whichever is less.
U-NII-3	☐	1 Watt (30 dBm)

Note: B* is the 26 dB emission bandwidth in MHz.

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The maximum conducted output power shall not exceed:

Band	EUT Category	Limit
U-NII-1	☒	N/A
U-NII-2A	☒	250mW (24 dBm) or 11dBm+10logB* Whichever is less.
U-NII-2C	☒	250mW (24 dBm) or 11dBm+10logB* Whichever is less.
U-NII-3	☐	1 Watt (30 dBm)

Note: B* is the 99% emission bandwidth in MHz.

The maximum e.i.r.p. shall not exceed:

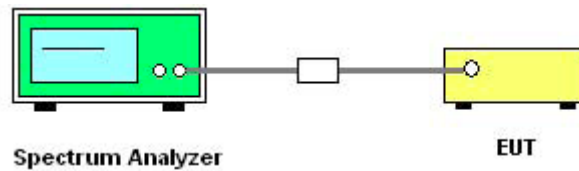
Band	EUT Category	Limit
U-NII-1	☒	200mW(23dBm) or 10dBm+10log B* Whichever is less.
U-NII-2A	☒	1W (30 dBm) or 17dBm+10logB* Whichever is less.
U-NII-2C	☒	1W (30 dBm) or 17dBm+10logB* Whichever is less.
U-NII-3	☐	N/A

Note: B* is the 99% emission bandwidth in MHz.

2.2.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.2.3. Test Setup



2.2.4. Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02 Method SA-1
2. The RF output of EUT was connected to spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW=1MHz, VBW=3MHz, Sweep time=Auto, Detector=average(RMS), Compute power by integrating the spectrum across the 99%OBW.
5. Measure the conducted output power and record the results in the test report.



2.2.5. Test Result

Please refer to APPENDIX A for detail

2.3. Emission Bandwidth

2.3.1. Limit of Bandwidth

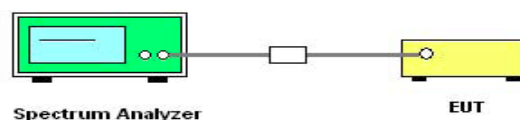
There is no limit bandwidth for bandU-NII-1, U-NII-2A and U-NII-2C.

The minimum of 6dB bandwidth measurement is 0.5 MHz for U-NII-3.

2.3.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.3.3. Test Setup



2.3.4. Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02.

2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

3. Set to the maximum power setting and enable the EUT transmit continuously.

4. For 26dB bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) = approximately 1%EBW, VBW $\geq$ 3RBW , Detector = Peak, Trace mode = max hold

Span > 26 dB bandwidth and Sweep time = auto

5. Use the spectrum analyzer N dB down function to find the 26dB bandwidth.

6. For 6 Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) = 100kHz
VBW = 300 kHz, Detector = Peak, Trace mode = max hold

7. Use the spectrum analyzer N dB down function to find the 6dB bandwidth

8. For 99% Occupied Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) = 1% to 5% of the OBW, VBW $\geq$ 3RBW, Detector = Peak, Trace mode = max hold, Span = 1.5 times to 5 times the OBW.

8. Measure and record the worst results in the test report.



2.3.5. Test Results Bandwidth

Please refer to APPENDIX A for detail

2.4. Power spectral density (PSD)

2.4.1. Limit of Power Spectral Density

FCC 15.407(a)

The maximum power spectral density should not exceed:

Band	EUT Category	Limit
U-NII-1	☐ Access Point (Master device)	17 dBm/MHz
	☐ Fixed point-to-point Access device	
	☒ Mobile and portable client device	11 dBm/MHz
U-NII-2A	☒	11 dBm/MHz
U-NII-2C	☒	11 dBm/MHz
U-NII-3	☐	30dBm/500kHz

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The maximum power spectral density should not exceed:

Band	EUT Category	Limit
U-NII-1	☒	N/A
U-NII-2A	☒	11 dBm/MHz
U-NII-2C	☒	11 dBm/MHz
U-NII-3	☐	30 dBm/500kHz

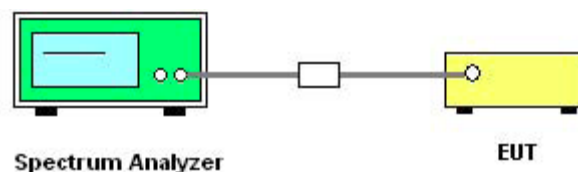
The e.i.r.p. spectral density should not exceed:

Band	EUT Category	Limit
U-NII-1	☒	10 dBm/MHz
U-NII-2A	☒	N/A
U-NII-2C	☒	N/A
U-NII-3	☐	N/A

2.4.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.4.3. Test Setup



2.4.4. Test Procedures

1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02.
3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to Spectrum.

4. For U-NII-1, U-NII-2A, U-NII-2C Band:

Using method SA-1

Set RBW=1MHz, VBW=3MHz, where span is enough to capture the entire bandwidth, Sweep time = Auto, detector = sample, traces 100 sweeps of averaging mode.

2.4.5. Test Results of Power spectral density

Please refer to APPENDIX A for detail

2.5. Frequency Stability

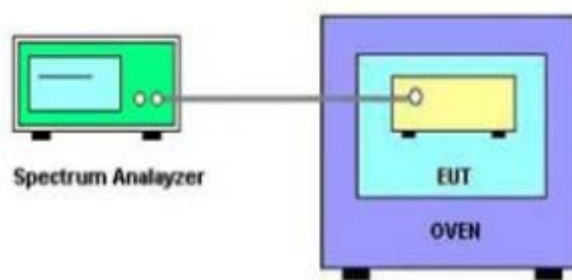
2.5.1. Limit

FCC 15.407(b) Frequency Stability	
Frequency Band(MHz)	Limit
5150~5250	Specified in the user's manual
5250~5350	
5470~5725	
5725~5850	

2.5.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.5.3. Test Setup



2.5.4. Test Procedures

1. The EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. The EUT is installed in an environment test chamber with external power source.
4. Set the chamber to operate at 50 centigrade and external power source to output at nominal voltage of EUT.
5. A sufficient stabilization period at each temperatures in used prior to each frequency measurement.
6. The test shall be performed under -10 to 55 centigrade and 85 to 115 percent of the nominal voltage. Change setting of chamber and external power source to complete all conditions.
7. Measure and record the worst results in the test report.



2.5.5. Test Results of Frequency Stability

Please refer to APPENDIX A for detail

2.6. Band Edge and Spurious Emission

2.6.1. Limit of Radiated Band Edges and Spurious Emission

Radiated emission which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

Frequency (MHz)	Field Strength ($\mu\text{V/m}$)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level ($\mu\text{V/m}$).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

Applicable To	Limit	
789033 D02 General UNII Test Procedures New Rules v01	Field Strength at 3m	
	PK:74(dB $\mu\text{V/m}$)	AV:54 (dB $\mu\text{V/m}$)

Frequency Band (MHz)	Frequency (MHz)	EIRP Limit (dBm)	Equivalent Field Strength (3m) (dB $\mu\text{V/m}$)
5150 - 5250	Outside of the 5.15~5.35 GHz	-27	68.2
5250 - 5350	Outside of the 5.15~5.35 GHz		
5470 -5725	Outside of the 5.47~5.725 GHz		

FCC 15.407			
Frequency Band (MHz)	Frequency (MHz)	EIRP Limit (dBm)	Equivalent Field Strength (3m) (dBμV/m)
5725 - 5850	<5650	-27	68.2
	5650~5700	-27~10	68.2~105.2
	5700~5720	10~15.6	105.2~110.8
	5720~5725	15.6~27	110.8~122.2
	5850~5855	27~15.6	122.2~110.8
	5855~5875	15.6~10	110.8~105.2
	5875~5925	10~-27	105.2~68.2
	>5925	-27	68.2

Note: 1. The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

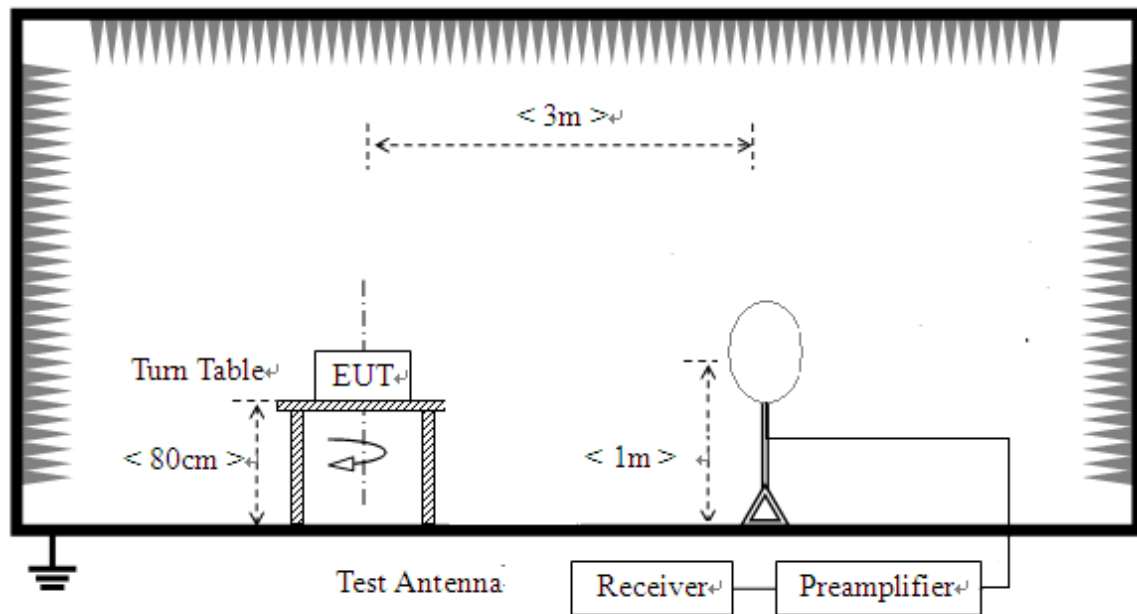
$$E = \frac{1000000 \sqrt{30P}}{3} \mu\text{V/m, where } P \text{ is the eirp (Watts).}$$

2.6.2. Measuring Instruments

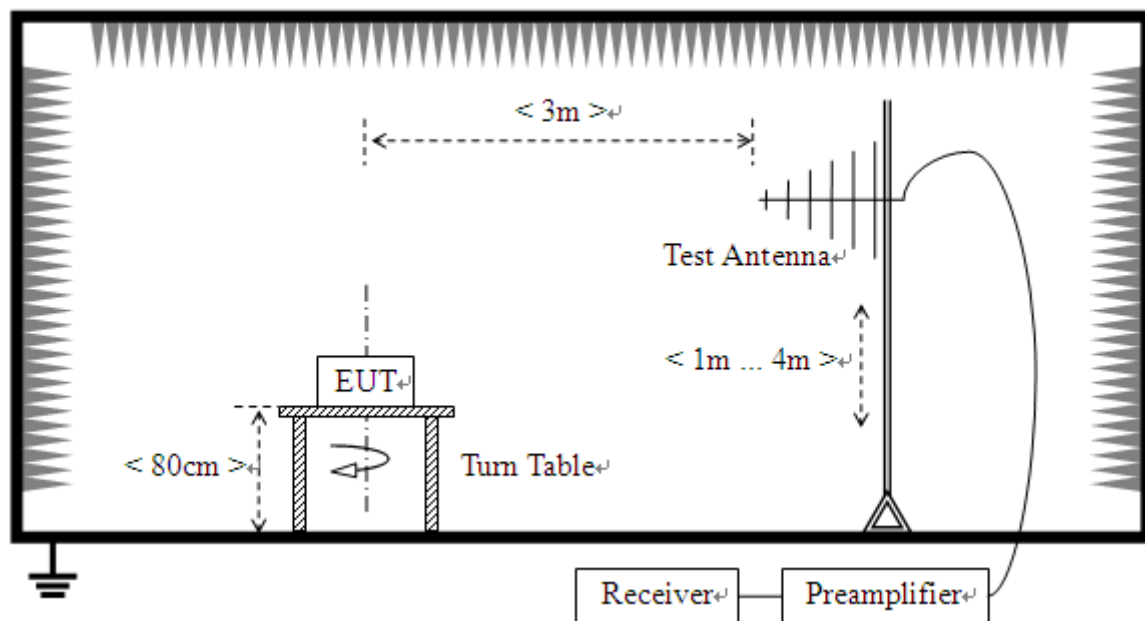
The measuring equipment is listed in the section 3 of this test report.

2.6.3. Test Setup

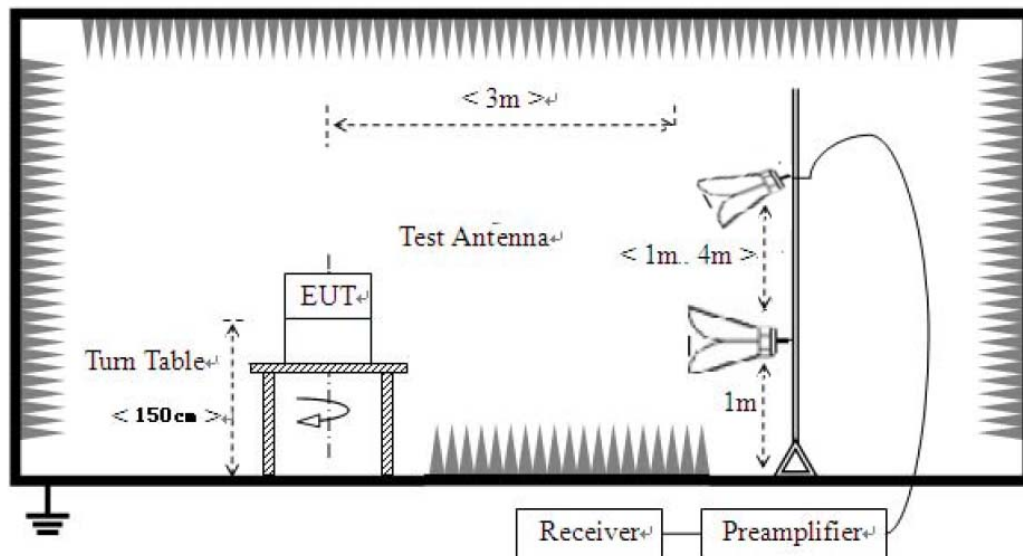
For radiated emissions from 9 KHz to 30 MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



2.6.4. Test Procedures

1. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
6. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

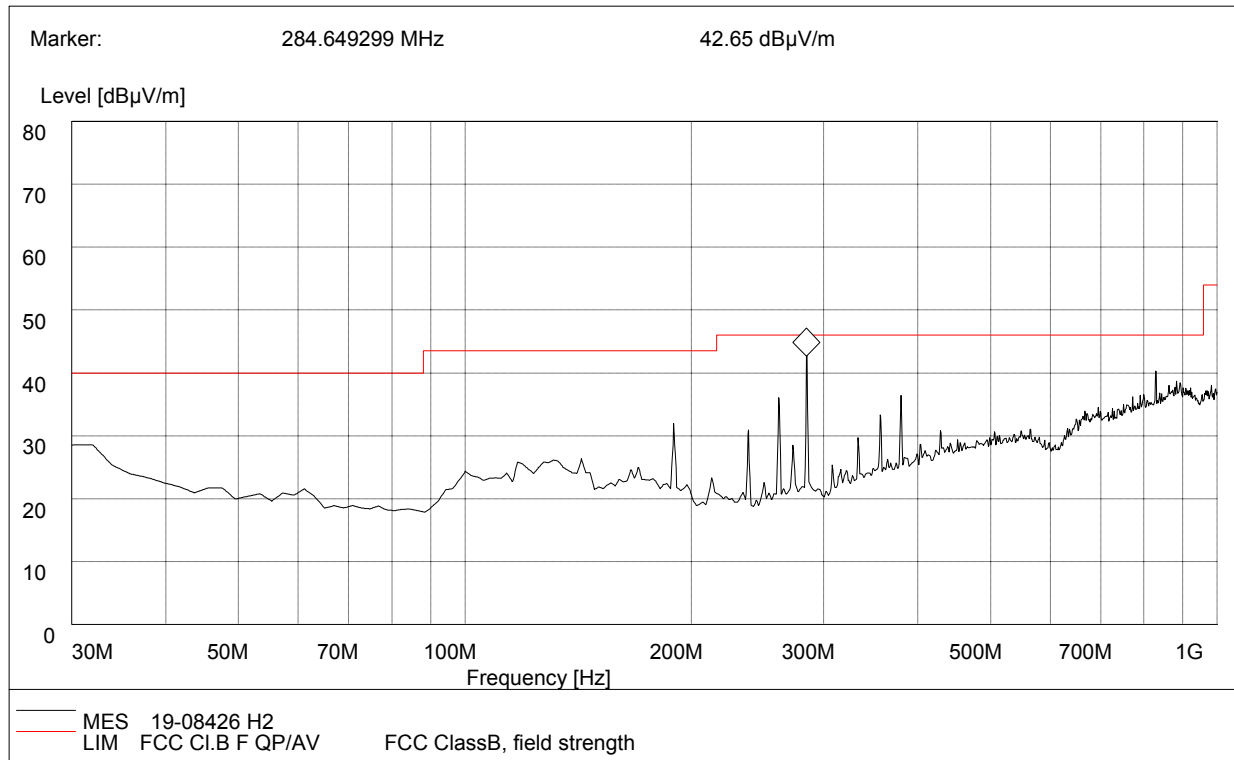
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor ($10 \log(1/\text{duty cycle})$).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

2.6.5. Test Results of Radiated Band Edge and Spurious Emission

For 9 KHz to 30MHz

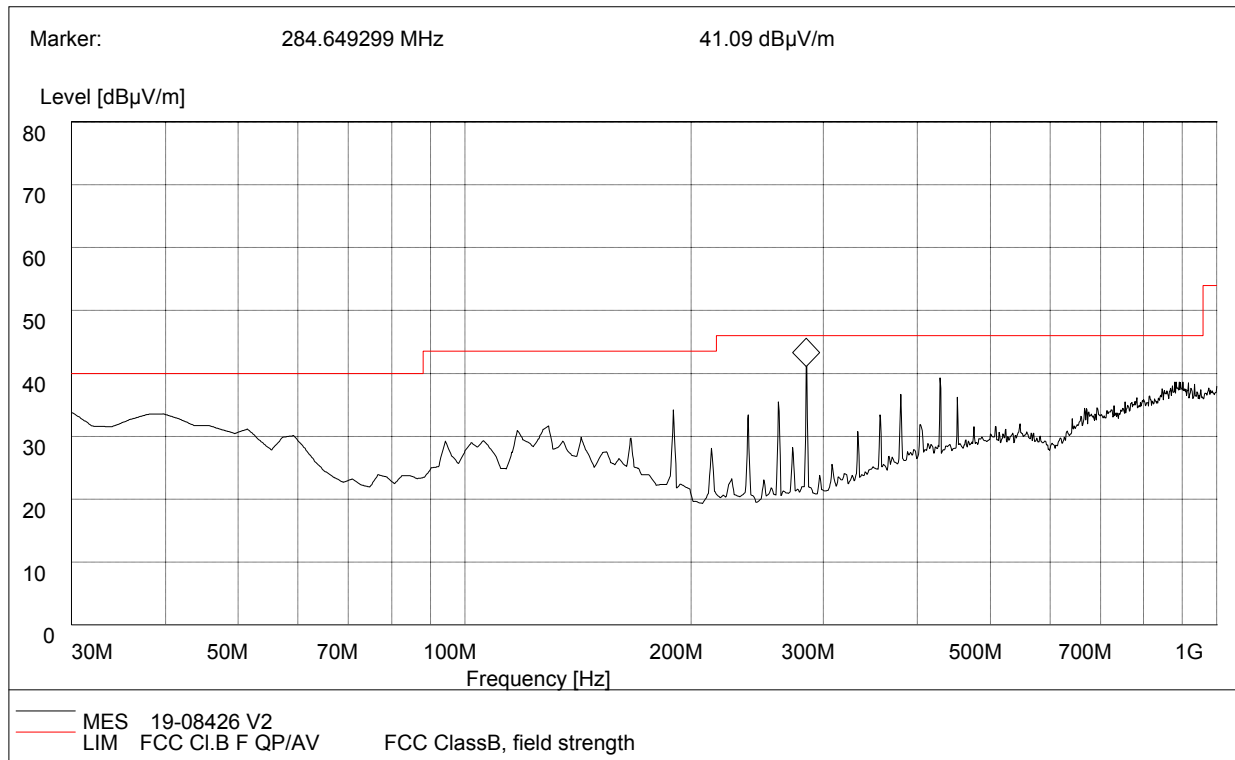
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

For 30MHz to 1000 MHz



30MHz to 1GHz, Antenna Horizontal

Frequency (MHz)	QuasiPeak (dB μ V/m)	Bandwidth (kHz)	Antenna height (cm)	Limit (dB μ V/m)	Antenna	Verdict
284.65	42.65	120.000	200.0	46.0	Horizontal	Pass



30MHz to 1GHz, Antenna Vertical

Frequency (MHz)	QuasiPeak (dB μ V/m)	Bandwidth (kHz)	Antenna height (cm)	Limit (dB μ V/m)	Antenna	Verdict
284.65	41.09	120.000	200.0	46.00	Vertical	Pass

For 1GHz to 40 GHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11a_5180MHz)									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	53.21	PK	68.20	-14.99	1.50	180	45.71	7.50
2	5150.00	43.05	AV	54.00	-10.95	1.50	180	35.55	7.50
3	10360.00	55.62	PK	68.20	-12.58	1.50	180	35.82	19.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11a_5180MHz)									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	52.61	PK	68.20	-15.59	1.50	180	45.11	7.50
2	5150.00	42.85	AV	54.00	-11.15	1.50	180	35.35	7.50
3	10360.00	54.65	PK	68.20	-13.55	1.50	180	34.85	19.80

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11a_5220MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10400.00	54.00	PK	68.20	-14.2	1.50	180	34.10	19.90
2	10400	41.13	AV	68.2	-27.07	1.80 H	120	21.23	19.9

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11a_5220MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10400.00	55.21	PK	68.20	-12.99	1.50	200	35.31	19.90

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11a_5240MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	55.21	PK	68.20	-12.99	1.70	120	47.21	8.00
2	5350.00	50.24	AV	54.00	-3.76	1.70	120	42.24	8.00
3	10480.00	56.32	PK	68.20	-11.88	1.70	280	36.42	19.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11a_5240MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	56.18	PK	68.20	-12.02	1.40	120	48.18	8.00
2	5350.00	46.53	AV	54.00	-7.47	1.40	120	38.53	8.00
3	10480.00	57.63	PK	68.20	-10.57	1.40	120	37.73	19.90

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11a_5260MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	56.95	PK	68.20	-11.25	2.00	200	49.45	7.50
2	5150.00	48.06	AV	54.00	-5.94	2.00	200	40.56	7.50
3	10520.00	54.16	PK	68.20	-14.04	2.00	200	34.16	20.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11a_5260MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	55.62	PK	68.20	-12.58	1.50	200	48.12	7.50
2	5150.00	47.47	AV	54.00	-6.53	1.50	200	39.97	7.50
3	10520.00	56.32	PK	68.20	-11.88	1.50	200	36.32	20.00

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11a_5300MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10600.00	53.62	PK	68.20	-14.58	1.60	300	33.62	20.00
2	10600.00	44.57	AV	54.00	-9.43	1.60	300	24.57	20.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11a_5300MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10600.00	54.16	PK	68.20	-14.04	1.70	200	34.16	20.00
2	10600.00	45.51	AV	54.00	-8.49	1.70	200	25.51	20.00

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11a_5320MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	55.65	PK	68.20	-12.55	1.20	200	47.65	8.00
2	5350.00	46.90	AV	54.00	-7.1	1.20	200	38.90	8.00
3	10640.00	54.28	PK	68.20	-13.92	1.20	200	34.18	20.10
4	10640.00	43.93	AV	54.00	-10.07	1.20	200	23.83	20.10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11a_5320MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	53.62	PK	68.20	-14.58	1.40	200	45.62	8.00
2	5350.00	44.27	AV	54.00	-9.73	1.40	200	36.27	8.00
3	10640.00	55.98	PK	68.20	-12.22	1.40	200	35.88	20.10
4	10640.00	46.84	AV	54.00	-7.16	1.40	200	26.74	20.10

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11a_5500MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5460.00	53.64	PK	68.20	-14.56	2.00	180	45.14	8.50
2	5460.00	44.90	AV	54.00	-9.1	2.00	180	36.40	8.50
3	5470.00	55.19	PK	68.20	-13.01	2.00	180	46.69	8.50
4	5470.00	46.45	AV	54.00	-7.55	2.00	180	37.95	8.50
5	11000.00	53.92	PK	68.20	-14.28	2.00	180	32.92	21.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11a_5500MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5460.00	56.26	PK	68.20	-11.94	1.40	210	47.76	8.50
2	5460.00	47.41	AV	54.00	-6.59	1.40	210	38.91	8.50
3	5470.00	55.84	PK	68.20	-12.36	1.40	210	47.34	8.50
4	5470.00	47.19	AV	54.00	-6.81	1.40	210	38.69	8.50
5	11000.00	54.15	PK	68.20	-14.05	1.40	210	33.15	21.00

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11a_5580MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	11160.00	56.62	PK	68.20	-11.58	1.40	190	35.12	21.50
2	11160.00	48.30	AV	54.00	-5.7	1.40	190	26.80	21.50

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11a_5580MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	11160.00	55.32	PK	68.20	-12.88	1.50	200	33.82	21.50
2	11160.00	46.83	AV	54.00	-7.17	1.50	200	25.33	21.50

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11a_5700MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5700.00	55.16	PK	68.20	-13.04	2.00	170	45.51	9.65
2	11400.00	53.17	PK	68.20	-15.03	1.80	170	31.67	21.50
3	11400.00	44.32	AV	54.00	-9.68	1.80	170	22.82	21.50

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11a_5700MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5700.00	53.62	PK	68.20	-14.58	1.60	180	43.97	9.65
2	11400.00	55.18	PK	68.20	-13.02	2.00	320	33.68	21.50
3	11400.00	45.80	AV	54.00	-8.2	2.00	320	24.30	21.50

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20_5180MHz)

No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	52.01	PK	68.20	-16.19	1.50	180	44.51	7.50
2	5150.00	41.85	AV	54.00	-12.15	1.50	180	34.35	7.50
3	10360.00	54.16	PK	68.20	-14.04	1.50	180	34.36	19.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20_5180MHz)

No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	52.22	PK	68.20	-15.98	1.50	180	44.72	7.50
2	5150.00	42.46	AV	54.00	-11.54	1.50	180	34.96	7.50
3	10360.00	54.63	PK	68.20	-13.57	1.50	180	34.83	19.80

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20_5220MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10400.00	53.96	PK	68.20	-14.24	1.50	180	34.06	19.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20_5220MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10400.00	54.36	PK	68.20	-13.84	1.50	200	34.46	19.90

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20_5240MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	56.32	PK	68.20	-11.88	1.70	120	48.32	8.00
2	5350.00	50.24	AV	54.00	-3.76	1.70	120	42.24	8.00
3	10480.00	57.95	PK	68.20	-10.25	1.70	280	38.05	19.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20_5240MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	58.95	PK	68.20	-9.25	1.40	120	50.95	8.00
2	5350.00	49.30	AV	54.00	-4.7	1.40	120	41.30	8.00
3	10480.00	57.00	PK	68.20	-11.2	1.50	120	37.10	19.90

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20_5260MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	55.62	PK	68.20	-12.58	2.00	200	48.12	7.50
2	5150.00	46.73	AV	54.00	-7.27	2.00	200	39.23	7.50
3	10520.00	57.14	PK	68.20	-11.06	2.00	200	37.14	20.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20_5260MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	56.34	PK	68.20	-11.86	1.50	200	48.84	7.50
2	5150.00	48.19	AV	54.00	-5.81	1.50	200	40.69	7.50
3	10520.00	55.19	PK	68.20	-13.01	1.50	200	35.19	20.00

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20_5300MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10600.00	54.95	PK	68.20	-13.25	1.60	300	34.95	20.00
2	10600.00	45.90	AV	54.00	-8.1	1.60	300	25.90	20.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20_5300MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10600.00	53.62	PK	68.20	-14.58	1.70	200	33.62	20.00
2	10600.00	44.97	AV	54.00	-9.03	1.70	200	24.97	20.00

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20_5320MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	52.94	PK	68.20	-15.26	1.20	200	44.94	8.00
2	5350.00	44.19	AV	54.00	-9.81	1.20	200	36.19	8.00
3	10640.00	53.87	PK	68.20	-14.33	1.20	200	33.77	20.10
4	10640.00	43.52	AV	54.00	-10.48	1.20	200	23.42	20.10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20_5320MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	52.65	PK	68.20	-15.55	1.40	200	44.65	8.00
2	5350.00	43.30	AV	54.00	-10.7	1.40	200	35.30	8.00
3	10640.00	54.11	PK	68.20	-14.09	1.40	200	34.01	20.10
4	10640.00	44.97	AV	54.00	-9.03	1.40	200	24.87	20.10

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20_5500MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5460.00	52.62	PK	68.20	-15.58	2.00	180	44.12	8.50
2	5460.00	43.88	AV	54.00	-10.12	2.00	180	35.38	8.50
3	5470.00	56.26	PK	68.20	-11.94	2.00	180	47.76	8.50
4	5470.00	47.52	AV	54.00	-6.48	2.00	180	39.02	8.50
5	11000.00	58.26	PK	68.20	-9.94	2.00	180	37.26	21.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20_5500MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5460.00	52.62	PK	68.20	-15.58	1.40	210	44.12	8.50
2	5460.00	43.77	AV	54.00	-10.23	1.40	210	35.27	8.50
3	5470.00	54.95	PK	68.20	-13.25	1.40	210	46.45	8.50
4	5470.00	46.30	AV	54.00	-7.7	1.40	210	37.80	8.50
5	11000.00	55.50	PK	68.20	-12.7	1.40	210	34.50	21.00

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20_5580MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	11160.00	55.65	PK	68.20	-12.55	1.40	190	34.15	21.50
2	11160.00	47.33	AV	54.00	-6.67	1.40	190	25.83	21.50

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20_5580MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	11160.00	54.95	PK	68.20	-13.25	1.50	200	33.45	21.50
2	11160.00	46.46	AV	54.00	-7.54	1.50	200	24.96	21.50

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20_5700MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5700.00	54.95	PK	68.20	-13.25	2.00	170	45.30	9.65
2	11400.00	52.32	PK	68.20	-15.88	1.80	170	30.82	21.50
3	11400.00	43.47	AV	54.00	-10.53	1.80	170	21.97	21.50

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20_5700MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5700.00	52.95	PK	68.20	-15.25	1.60	180	43.30	9.65
2	11400.00	55.18	PK	68.20	-13.02	2.00	320	33.68	21.50
3	11400.00	45.80	AV	54.00	-8.2	2.00	320	24.30	21.50

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n40_5190MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	55.64	PK	68.20	-12.56	1.40	320.00	48.14	7.50
2	5150.00	45.31	AV	54.00	-8.69	1.40	320.00	37.81	7.50
3	10380.00	56.26	PK	68.20	-11.94	1.40	320.00	36.46	19.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n40_5190MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	54.19	PK	68.20	-14.01	1.80	180.00	46.69	7.50
2	5150.00	44.45	AV	54.00	-9.55	1.80	180.00	36.95	7.50
3	10380.00	54.85	PK	68.20	-13.35	1.80	180.00	35.05	19.80

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n40_5230MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	53.62	PK	68.20	-14.58	1.50	260.00	45.62	8.00
2	5350.00	43.34	AV	54.00	-10.66	1.50	260.00	35.34	8.00
3	10460.00	54.18	PK	68.20	-14.02	1.50	260.00	34.28	19.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n40_5230MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	52.62	PK	68.20	-15.58	1.60	300.00	44.62	8.00
2	5350.00	42.49	AV	54.00	-11.51	1.60	300.00	34.49	8.00
3	10460.00	55.94	PK	68.20	-21.54	1.60	320.00	36.04	19.90

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n40_5270MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	58.94	PK	68.20	-9.26	1.70	170.00	51.44	7.50
2	5150.00	50.59	AV	54.00	-3.41	1.70	170.00	43.09	7.50
3	10540.00	56.32	PK	68.20	-11.88	1.70	170.00	36.32	20.00
4	10540.00	48.18	AV	54.00	-5.82	1.70	170.00	28.18	20.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n40_5270MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	57.95	PK	68.20	-10.25	1.20	280.00	50.45	7.50
2	5150.00	47.80	AV	54.00	-6.2	1.20	280.00	40.30	7.50
3	10540.00	53.21	PK	68.20	-14.99	1.20	280.00	33.21	20.00
4	10540.00	42.85	AV	54.00	-11.15	1.20	280.00	22.85	20.00

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n40_5310MHz)

No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	53.12	PK	68.20	-15.08	1.40	290.00	45.12	8.00
2	5350.00	42.37	AV	54.00	-11.63	1.40	290.00	34.37	8.00
3	10640.00	54.11	PK	68.20	-14.09	1.40	290.00	34.01	20.10
4	10640.00	45.97	AV	54.00	-8.03	1.40	290.00	25.87	20.10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n40_5310MHz)

No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	53.62	PK	68.20	-14.58	1.70	280.00	45.62	8.00
2	5350.00	44.27	AV	54.00	-9.73	1.70	280.00	36.27	8.00
3	10620.00	54.19	PK	68.20	-14.01	1.70	280.00	34.09	20.10
4	10620.00	45.05	AV	54.00	-8.95	1.70	280.00	24.95	20.10

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n40_5510MHz)

No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5460.00	52.16	PK	68.20	-16.04	1.70	300.00	43.66	8.50
2	5460.00	41.42	AV	54.00	-12.58	1.70	300.00	32.92	8.50
3	5470.00	54.03	PK	68.20	-14.17	1.70	300.00	45.53	8.50
4	5470.00	43.29	AV	54.00	-10.71	1.70	300.00	34.79	8.50
5	11020.00	55.32	PK	68.20	-12.88	1.70	300.00	34.32	21.00
6	11020.00	44.86	AV	54.00	-9.14	1.70	300.00	23.86	21.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n40_5510MHz)

No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5460.00	51.62	PK	68.20	-16.58	1.80	330.00	43.12	8.50
2	5460.00	40.97	AV	54.00	-13.03	1.80	330.00	32.47	8.50
3	5470.00	52.24	PK	68.20	-15.96	1.80	330.00	43.74	8.50
4	5470.00	41.59	AV	54.00	-12.41	1.80	330.00	33.09	8.50
5	11020.00	53.64	PK	68.20	-14.56	1.80	330.00	32.64	21.00
6	11020.00	42.79	AV	54.00	-11.21	1.80	330.00	21.79	21.00

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n40_5670MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	11340.00	54.61	PK	68.20	-13.59	1.50	120.00	33.21	21.40
2	11340.00	43.87	AV	54.00	-10.13	1.50	120.00	22.47	21.40

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n40_5670MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	11340.00	54.22	PK	68.20	-13.98	1.50	100.00	32.82	21.40
2	11340.00	43.64	AV	54.00	-10.36	1.50	100.00	22.24	21.40

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

2.7. Conducted Emission

2.7.1. Limit of Conducted Emission

FCC 15.207,

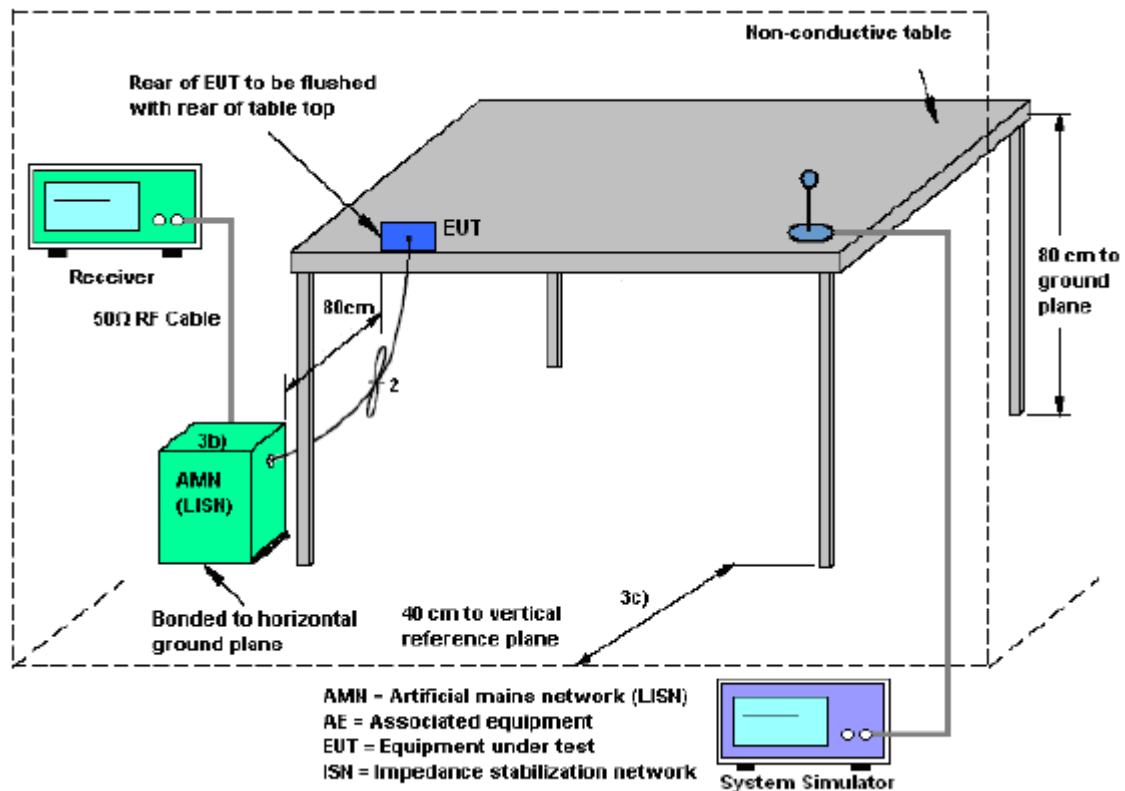
For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency range (MHz)	Conducted Limit (dBμV)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

2.7.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.7.3. Test Setup

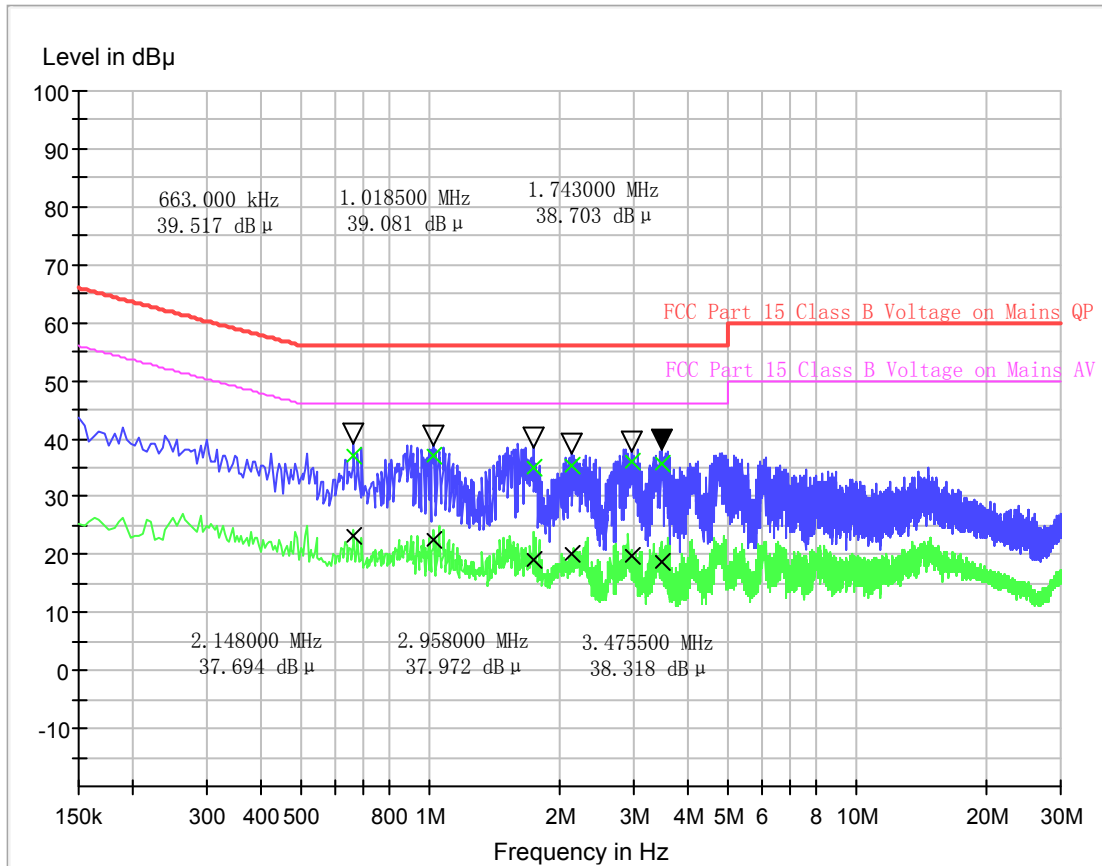


2.7.4. Test Procedures

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

2.7.5. Test Results of Conducted Emission

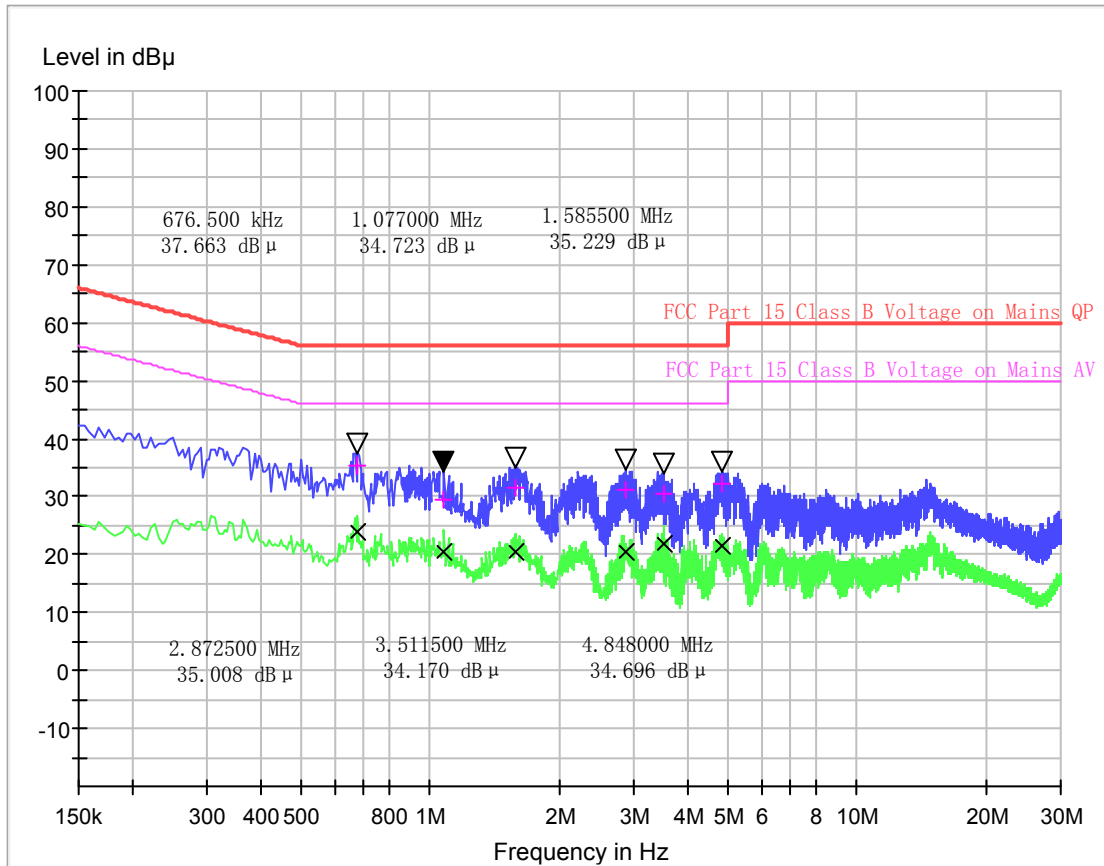
The EUT configuration of the emission tests is 5G WLAN Link + USB Cable (Charging from Adapter)



Conducted Disturbance at Mains Terminals

L Test Data

QP			AV		
Frequency (MHz)	Limits (dBμV)	Measurement Value (dBμV)	Frequency (MHz)	Limits (dBμV)	Measurement Value (dBμV)
0.663000	56.0	37.17	0.663000	46.0	23.22
1.018500	56.0	36.90	1.018500	46.0	22.51
1.743000	56.0	34.93	1.743000	46.0	19.24
2.148000	56.0	35.48	2.148000	46.0	20.01
2.958000	56.0	35.92	2.958000	46.0	19.68
3.475500	56.0	35.53	3.475500	46.0	18.70



Conducted Disturbance at Mains Terminals					
N Test Data					
QP			AV		
Frequency (MHz)	Limits (dBμV)	Measurement Value (dBμV)	Frequency (MHz)	Limits (dBμV)	Measurement Value (dBμV)
0.676500	56.0	35.21	0.676500	46.0	23.75
1.077000	56.0	29.58	1.077000	46.0	20.45
1.585500	56.0	31.61	1.585500	46.0	20.56
2.872500	56.0	31.23	2.872500	46.0	20.47
3.511500	56.0	30.43	3.511500	46.0	21.93
4.848000	56.0	32.18	4.848000	46.0	21.46

3. List of measuring equipment

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	EMI TEST RECEIVER	R&S	ESW26	A180502935	2018.11.1	2019.10.31
2	Power Meter	R&S	NRP-Z31	102872	2019.5.5	2020.05.04
3	TURNTABLE	ETS	2088	2149	N/A	N/A
4	ANTENNA MAST	ETS	2075	2346	N/A	N/A
5	EMI TEST Software	R&S	ESK1	N/A	N/A	N/A
6	Horn antenna (18GHz~26.5GHz)	AR	AT4002A	305753	2017.11.10	2020.11.09
7	Amplifier	MILMEGA	80RF1000-250	A140901925	2017.10.09	2020.10.08
8	JS amplifier	AR	25S1G4AM1	A0304248	2017.10.09	2020.10.08
9	High pass filter	Compliance Direction systems	BSU-6	34202	2018.11.11	2019.11.10
13	Horn Antenna	ShwarzBeck	9120D	1012	2018.11.11	2019.11.10
14	Horn Antenna	ShwarzBeck	BBHA9170	25841	2018.11.11	2019.11.10
15	ULTRA-BROADBAND ANTENNA	R&S	HL562	A0304224	2017.07.14	2020.07.13
16	Passive Loop Antenna	R&S	HFH2-Z2	100047	2019.04.26	2022.04.25
17	Temperature chamber	Dongguan gaoda instrument CO.LTD	GD-7005-100	130130101	2019.04.22	2020.04.21
18	Spectrum Analyzer	Keysight	N9030A	A160702554	2018.11.15	2019.11.14
19	Power Supply	R&S	NGMO1	101037	2019.08.03	2020.08.02
20	EMI TEST RECEIVER	KEYSIGHT	ESIB26	A0304218	2019.05.20	2020.05.19
21	LISN	ROHDE&SCHWARZ	ENV216	A140701847	2018.12.10	2019.12.10
22	Cable	MATCHING PAD	W7	/	2019.01.02	2020.01.01

Appendix A

Conducted output power

Test results

U-NII-1 AVGSA Output Power				
Mode	Test Frequency (MHz)	Max Conducted Output Power (dBm)	Limit (dBm)	Result
802.11n (20MHz)	5180	12.34	24	Pass
802.11n (20MHz)	5220	12.31	24	Pass
802.11n (20MHz)	5240	12.17	24	Pass
802.11n (40MHz)	5190	12.07	24	Pass
802.11n (40MHz)	5230	12.40	24	Pass
802.11a (20MHz)	5180	15.93	24	Pass
802.11a (20MHz)	5220	16.29	24	Pass
802.11a (20MHz)	5240	16.50	24	Pass

U-NII-2a AVGSA Output Power				
Mode	Test Frequency (MHz)	Max Conducted Output Power (dBm)	Limit (dBm)	Result
802.11n (20MHz)	5260	12.25	24	Pass
802.11n (20MHz)	5300	11.83	24	Pass
802.11n (20MHz)	5320	11.30	24	Pass
802.11n (40MHz)	5270	11.95	24	Pass
802.11n (40MHz)	5310	11.49	24	Pass
802.11a (20MHz)	5260	16.31	24	Pass
802.11a (20MHz)	5300	16.01	24	Pass
802.11a (20MHz)	5320	15.37	24	Pass

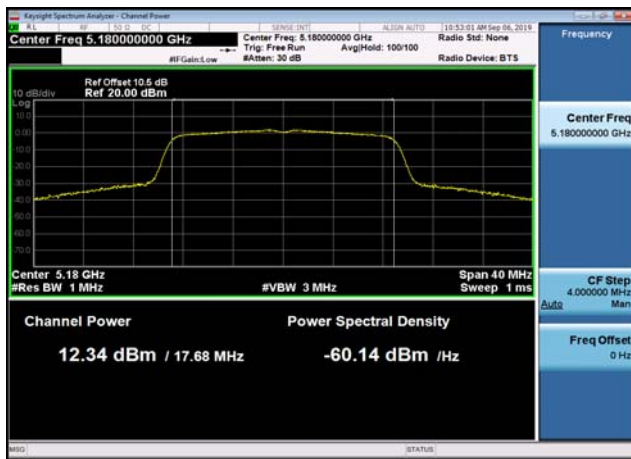
Remark: $250\text{mw (24dBm)} < 11\text{dBm} + 10 \log B$ (where B is the 26 dB emission bandwidth in megahertz) ,so the limit is 24dBm

U-NII-2c AVGSA Output Power				
Mode	Test Frequency (MHz)	Max Conducted Output Power (dBm)	Limit (dBm)	Result
802.11n (20MHz)	5500	11.86	24	Pass
802.11n (20MHz)	5600	12.72	24	Pass
802.11n (20MHz)	5700	12.87	24	Pass
802.11n (40MHz)	5510	11.24	24	Pass
802.11n (40MHz)	5590	12.28	24	Pass
802.11n (40MHz)	5670	12.77	24	Pass
802.11a (20MHz)	5500	15.83	24	Pass
802.11a (20MHz)	5600	16.35	24	Pass
802.11a (20MHz)	5700	16.25	24	Pass

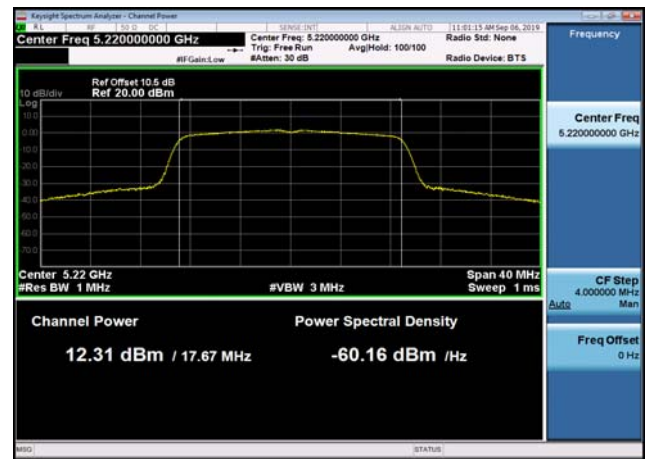
Remark: 250mw (24dBm) $< 11\text{dBm} + 10 \log B$ (where B is the 26 dB emission bandwidth in megahertz) ,so the limit is 24dBm

Test Plots

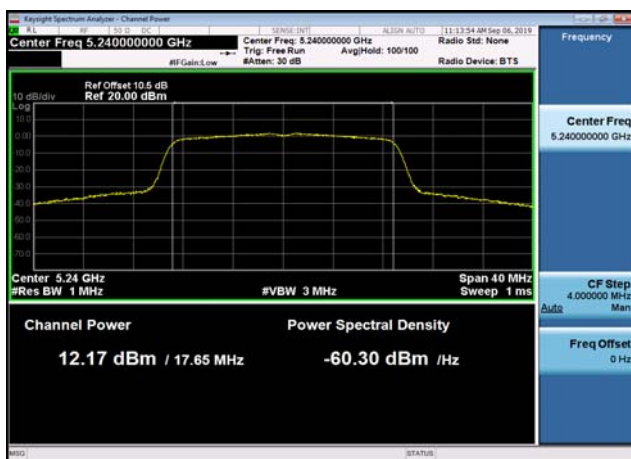
U-NII-1 Output Power-802.11n(20MHz)
,5180MHz



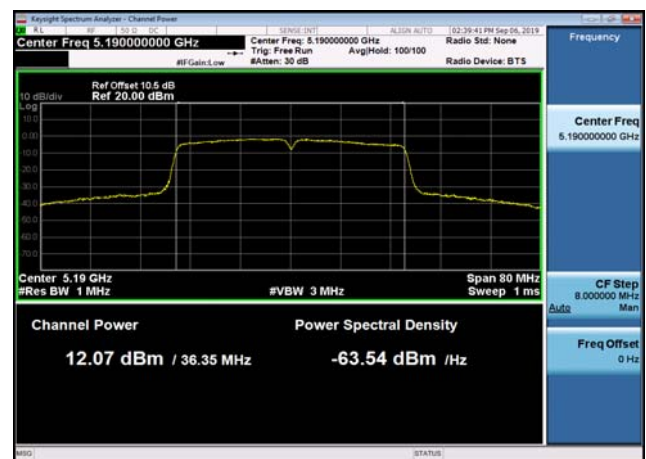
U-NII-1 Output Power-802.11n(20MHz)
,5220MHz



U-NII-1 Output Power-802.11n(20MHz)
,5240MHz



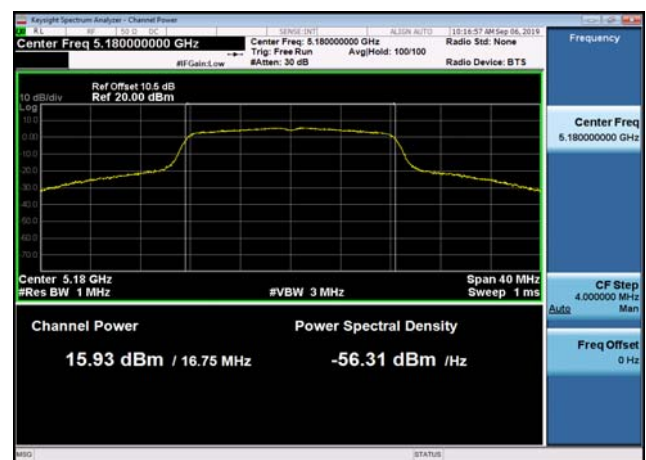
U-NII-1 Output Power-802.11n(40MHz)
,5190MHz



U-NII-1 Output Power-802.11n(40MHz)
,5230MHz



U-NII-1 Output Power-802.11a(20MHz)
,5180MHz



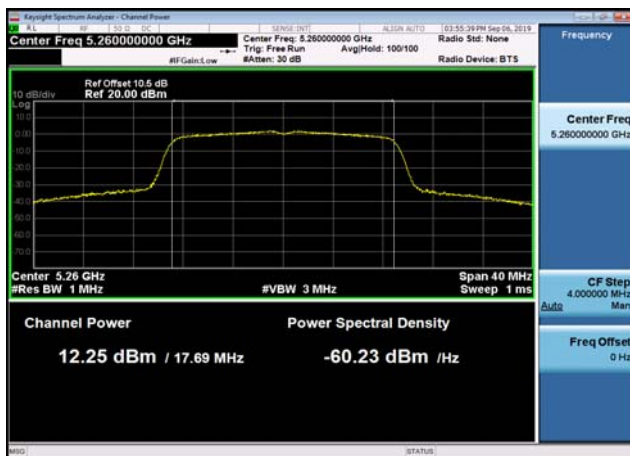
U-NII-1 Output Power-802.11a(20MHz)
,5220MHz



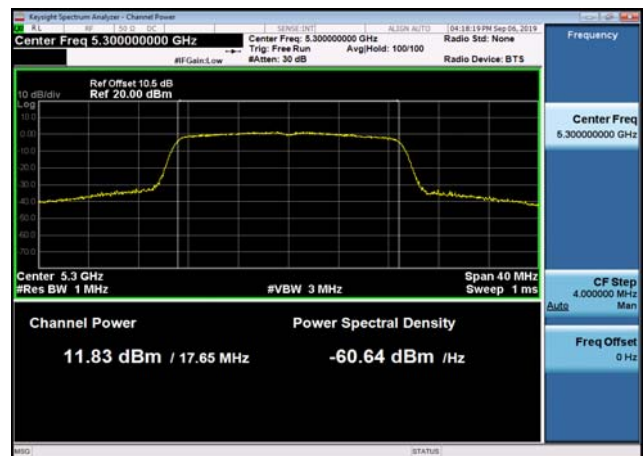
U-NII-1 Output Power-802.11a(20MHz)
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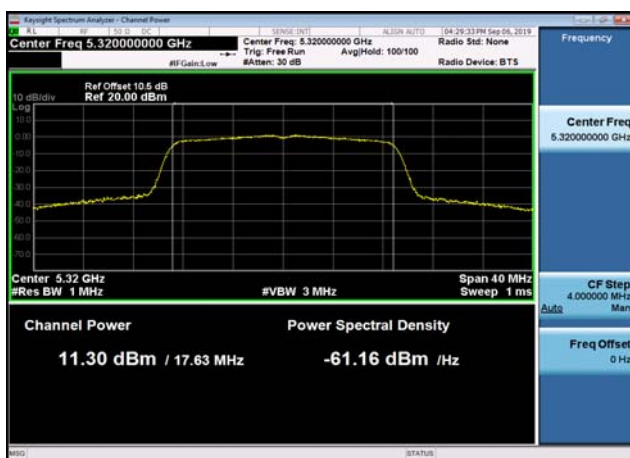
U-NII-2a Output Power-802.11n(20MHz)
,5260MHz



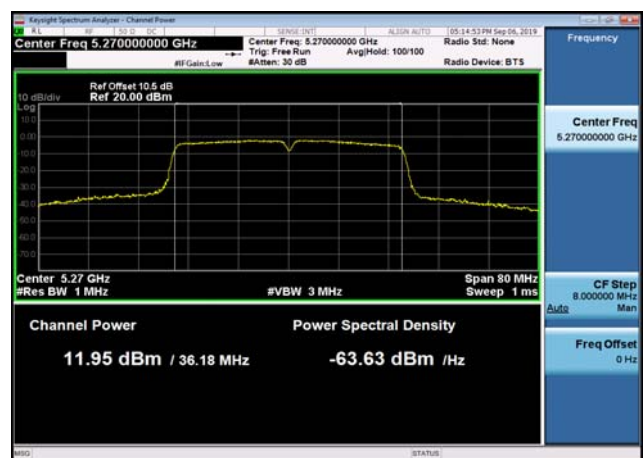
U-NII-2a Output Power-802.11n(20MHz)
,5300MHz



U-NII-2a Output Power-802.11n(20MHz)
,5320MHz



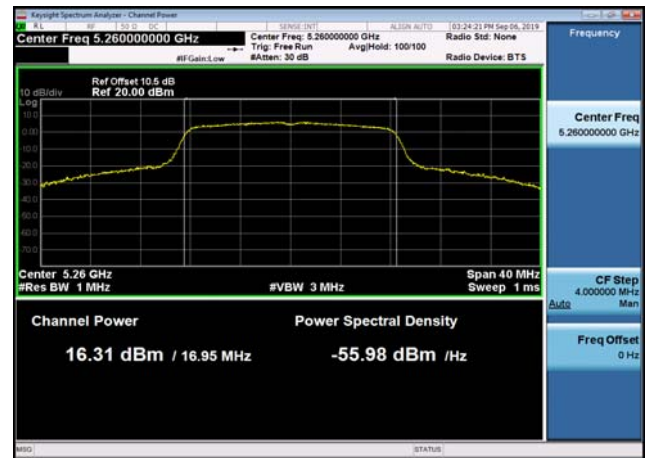
U-NII-2a Output Power-802.11n(40MHz)
,5270MHz



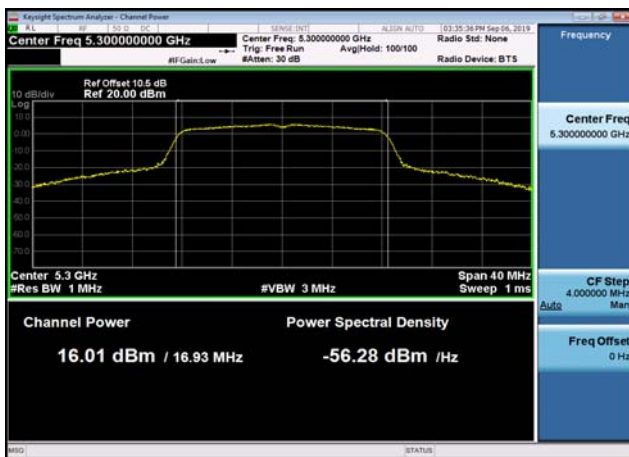
U-NII-2a Output Power-802.11n(40MHz)
,5310MHz



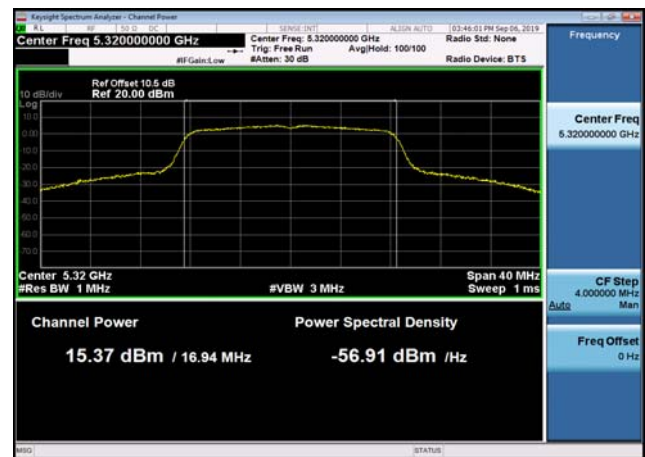
U-NII-2a Output Power-802.11a(20MHz)
,5260MHz



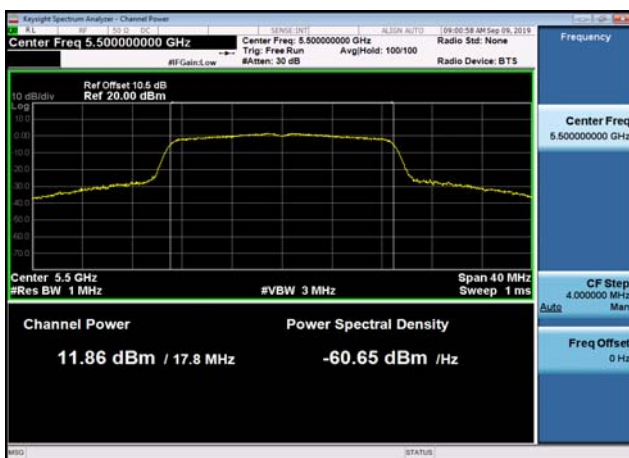
U-NII-2a Output Power-802.11a(20MHz)
,5300MHz



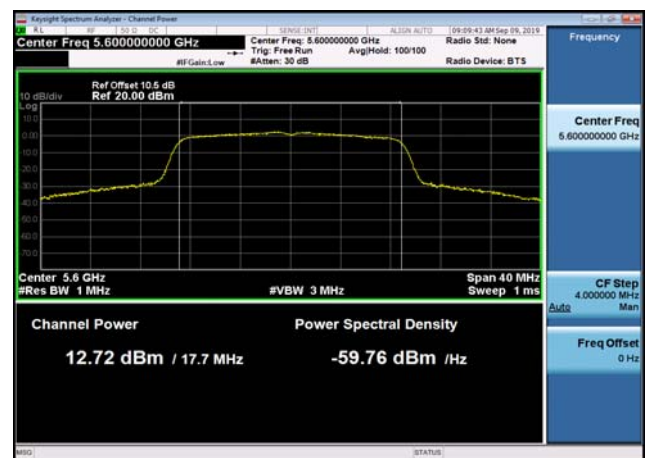
U-NII-2a Output Power-802.11a(20MHz)
,5320MHz



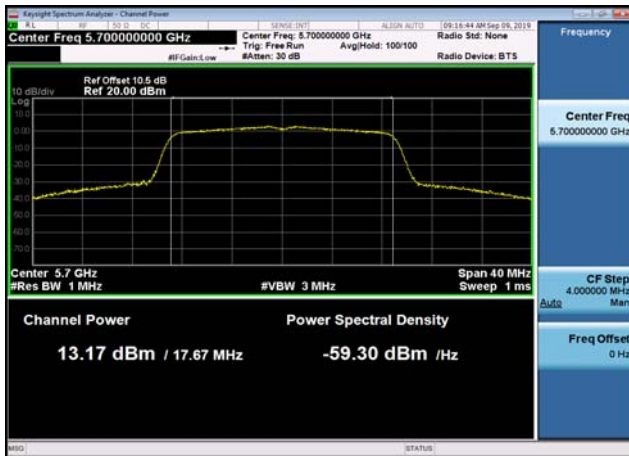
U-NII-2c Output Power-802.11n(20MHz)
,5500MHz



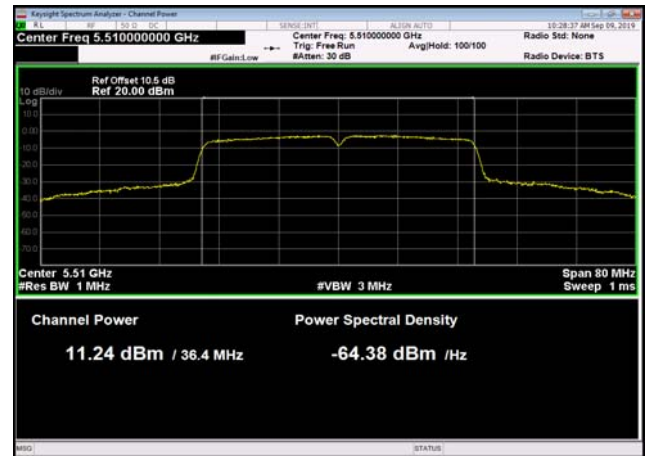
U-NII-2c Output Power-802.11n(20MHz)
,5600MHz



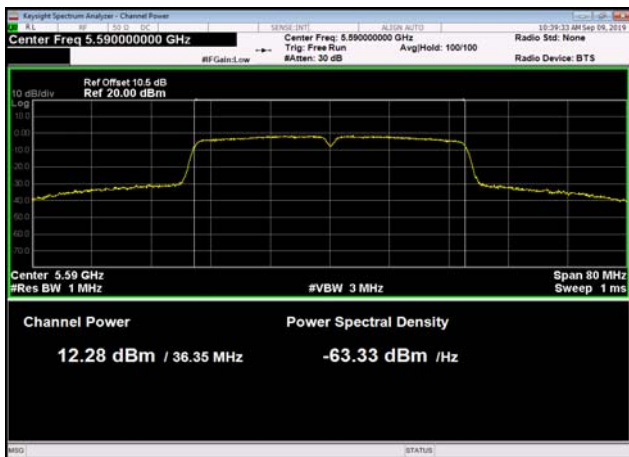
U-NII-2c Output Power-802.11n(20MHz)
,5700MHz



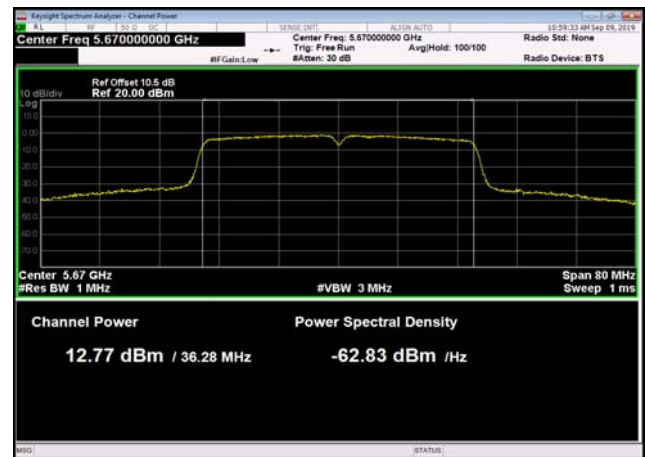
U-NII-2c Output Power-802.11n(40MHz)
,5510MHz



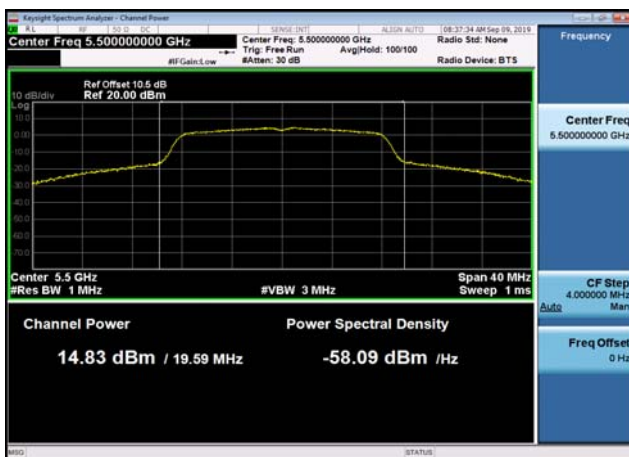
U-NII-2c Output Power-802.11n(40MHz)
,5590MHz



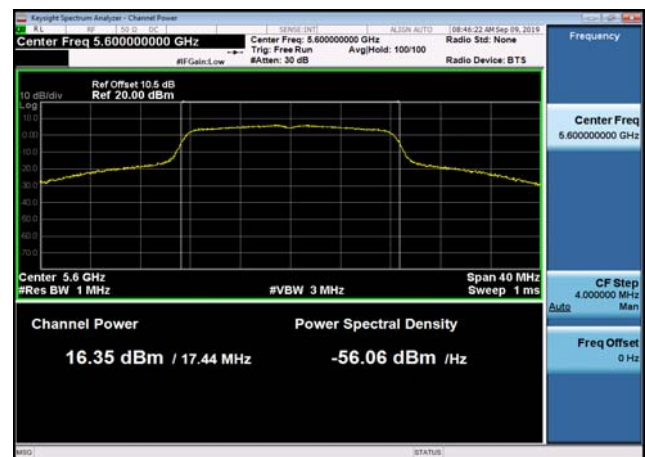
U-NII-2c Output Power-802.11n(40MHz)
,5670MHz



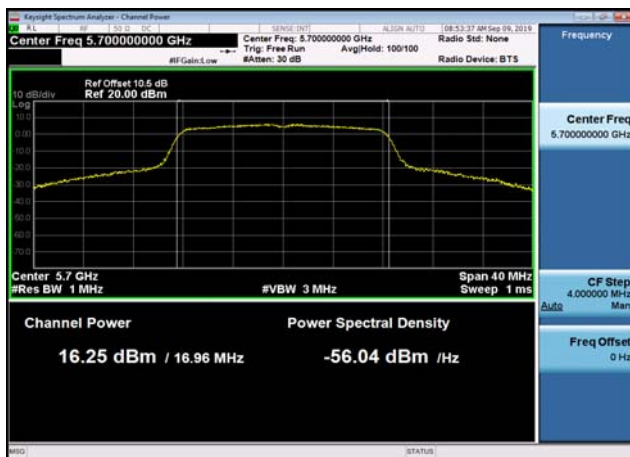
U-NII-2c Output Power-802.11a(20MHz)
,5500MHz



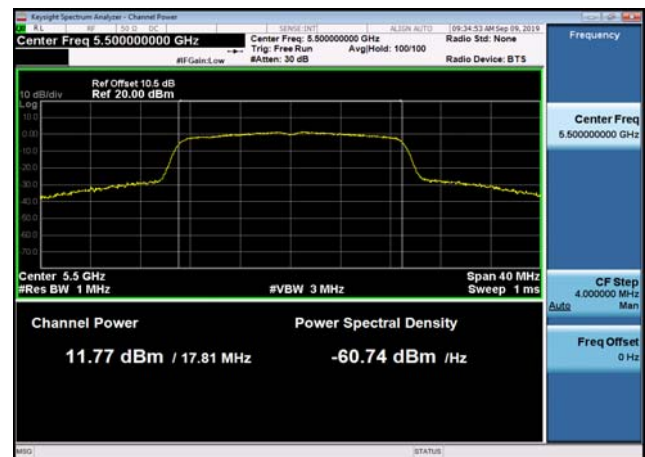
U-NII-2c Output Power-802.11a(20MHz)
,5600MHz



U-NII-2c Output Power-802.11a(20MHz) ,5700MHz



U-NII-2c Output Power-802.11ac(20MHz) ,5500MHz



AVGSA Power Spectral Density

Test Result and Data

U-NII-1 AVGSA Power Spectral Density				
Mode	Test Frequency (MHz)	PSD (dBm/1MHz)	Limit (dBm/1MHz)	Result
802.11n (20MHz)	5180	1.484	11	Pass
802.11n (20MHz)	5220	1.590	11	Pass
802.11n (20MHz)	5240	1.513	11	Pass
802.11n (40MHz)	5190	-1.864	11	Pass
802.11n (40MHz)	5230	-1.392	11	Pass
802.11a (20MHz)	5180	5.473	11	Pass
802.11a (20MHz)	5220	5.664	11	Pass
802.11a (20MHz)	5240	6.031	11	Pass
U-NII-2a AVGSA Power Spectral Density				
Mode	Test Frequency (MHz)	PSD (dBm/1MHz)	Limit (dBm/1MHz)	Result
802.11n (20MHz)	5260	2.082	11	Pass
802.11n (20MHz)	5300	1.927	11	Pass
802.11n (20MHz)	5320	0.996	11	Pass
802.11n (40MHz)	5270	-1.460	11	Pass
802.11n (40MHz)	5310	-1.938	11	Pass
802.11a (20MHz)	5260	6.180	11	Pass
802.11a (20MHz)	5300	5.922	11	Pass
802.11a (20MHz)	5320	5.557	11	Pass
U-NII-2c AVGSA Power Spectral Density				
Mode	Test Frequency (MHz)	PSD (dBm/1MHz)	Limit (dBm/1MHz)	Result
802.11n (20MHz)	5500	2.295	11	Pass
802.11n (20MHz)	5600	2.785	11	Pass
802.11n (20MHz)	5700	3.219	11	Pass
802.11n (40MHz)	5510	-1.922	11	Pass
802.11n (40MHz)	5590	-0.467	11	Pass
802.11n (40MHz)	5670	-0.110	11	Pass
802.11a (20MHz)	5500	5.177	11	Pass
802.11a (20MHz)	5600	6.816	11	Pass
802.11a (20MHz)	5700	6.642	11	Pass

Test Plots

U-NII-1 Power spectral density-802.11
n(20MHz),5180MHz



U-NII-1 Power spectral density-802.11
n(20MHz),5220MHz



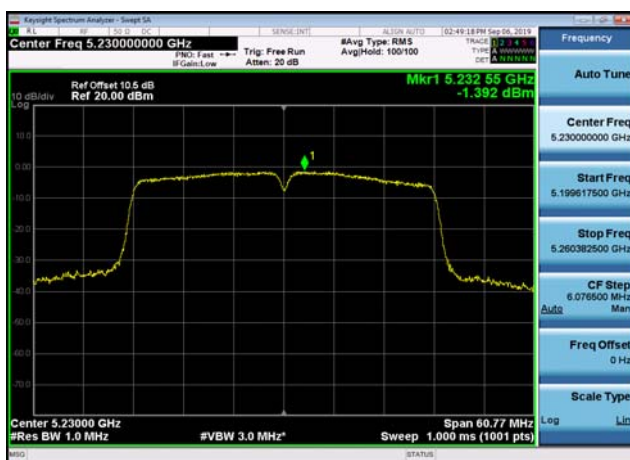
U-NII-1 Power spectral density-802.11
n(20MHz),5240MHz



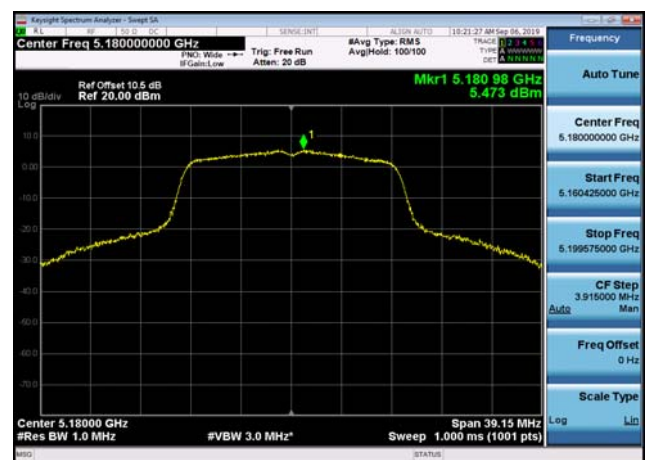
U-NII-1 Power spectral density-802.11
n(40MHz),5190MHz



U-NII-1 Power spectral density-802.11
n(40MHz),5230MHz



U-NII-1 Power spectral density-802.11
a(20MHz),5180MHz



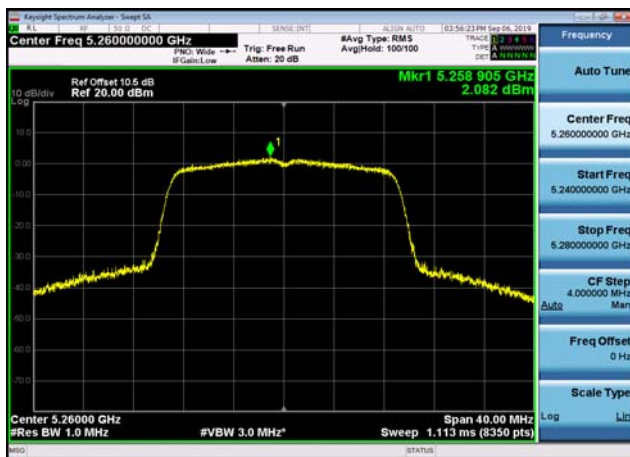
U-NII-1 Power spectral density-802.11
a(20MHz),5220MHz



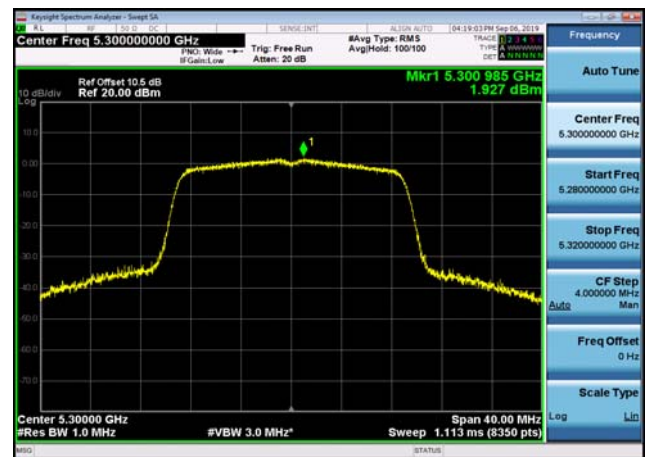
U-NII-1 Power spectral density-802.11
a(20MHz),5240MHz



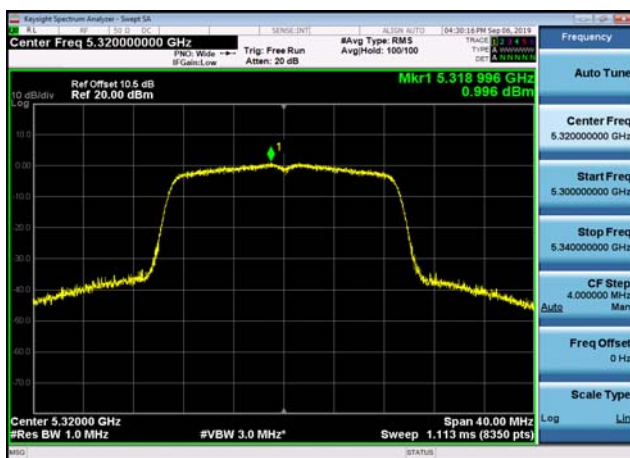
U-NII-2a Power spectral density-802.1
1n(20MHz),5260MHz



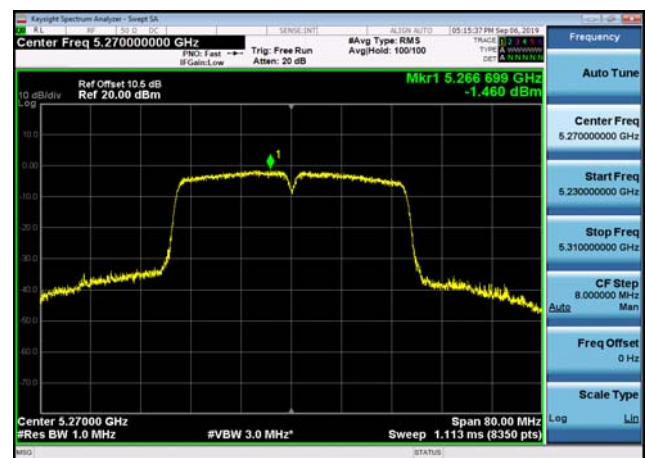
U-NII-2a Power spectral density-802.1
1n(20MHz),5300MHz



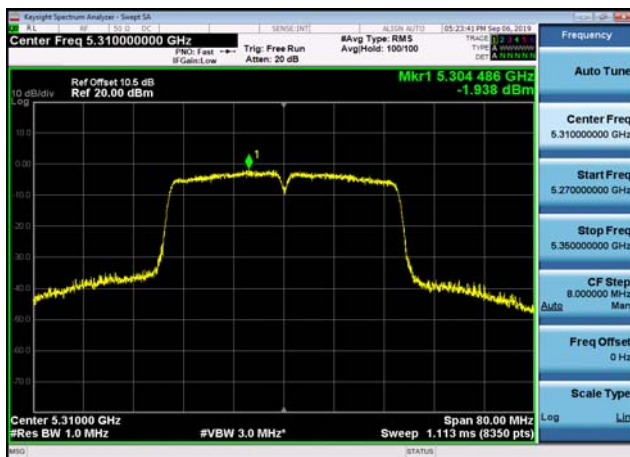
U-NII-2a Power spectral density-802.1
1n(20MHz),5320MHz



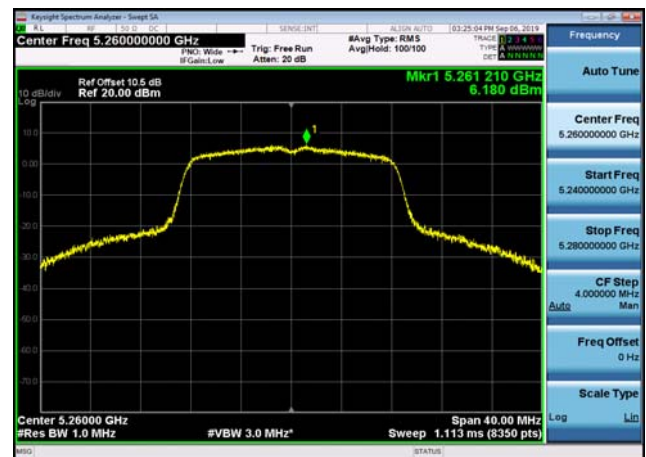
U-NII-2a Power spectral density-802.1
1n(40MHz),5270MHz



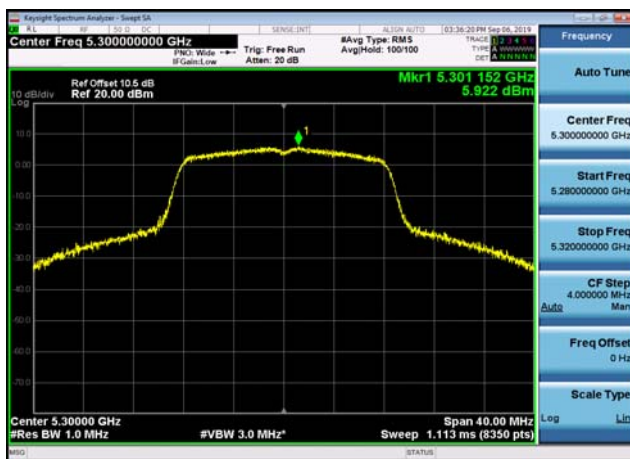
U-NII-2a Power spectral density-802.1
1n(40MHz),5310MHz



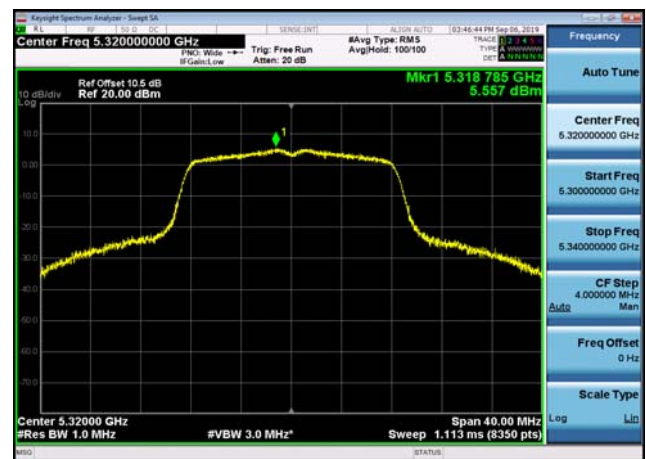
U-NII-2a Power spectral density-802.1
1a(20MHz),5260MHz



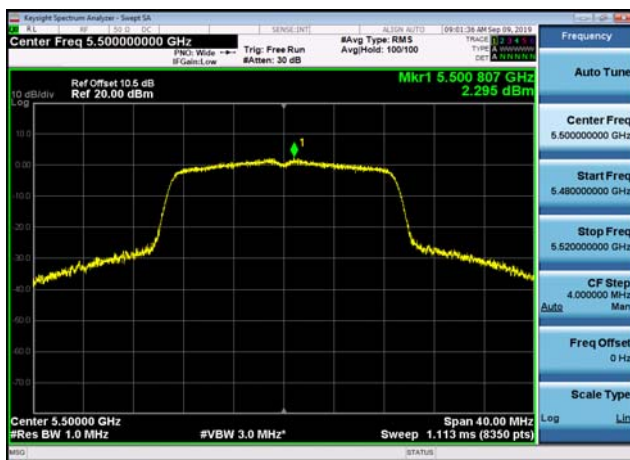
U-NII-2a Power spectral density-802.1
1a(20MHz),5300MHz



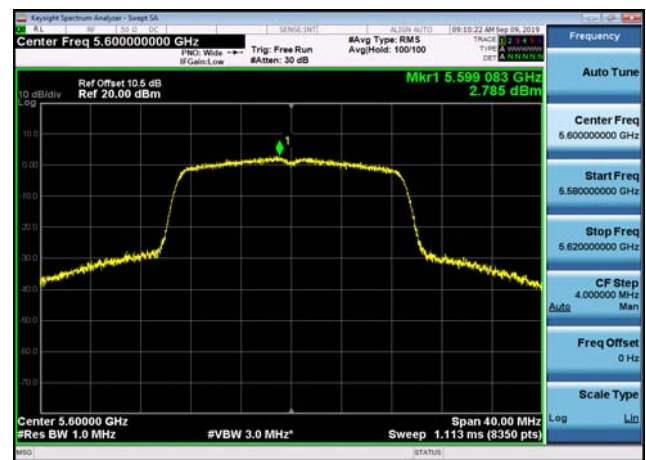
U-NII-2a Power spectral density-802.1
1a(20MHz),5320MHz



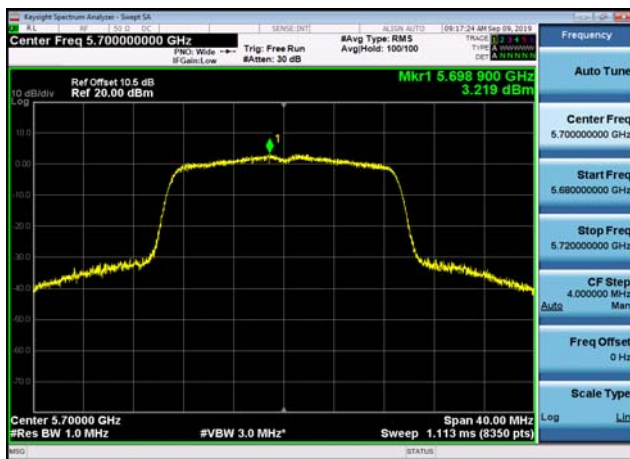
U-NII-2c Power spectral density-802.1
1n(20MHz),5500MHz



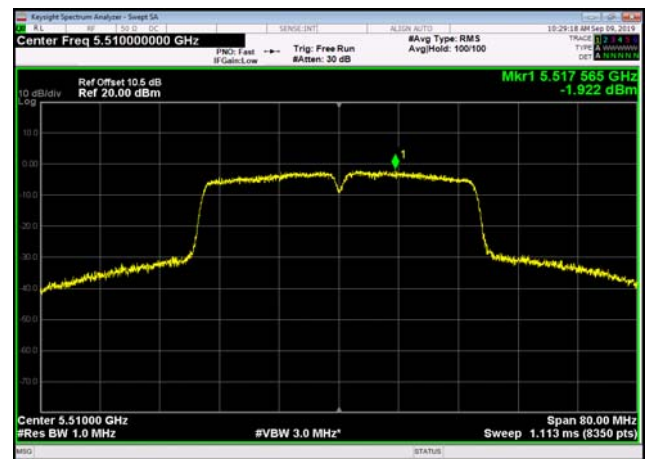
U-NII-2c Power spectral density-802.1
1n(20MHz),5600MHz



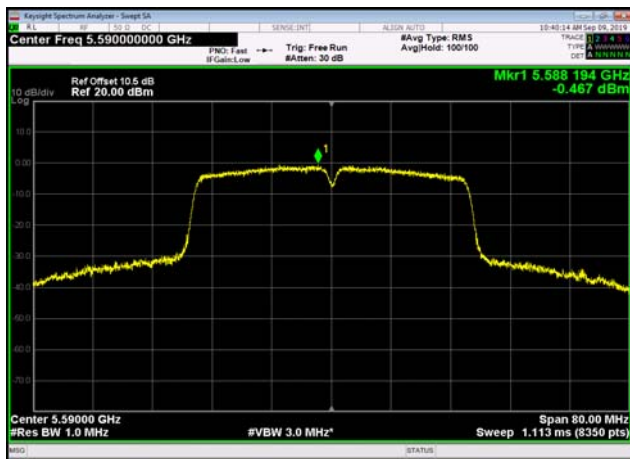
U-NII-2c Power spectral density-802.1
1n(20MHz),5700MHz



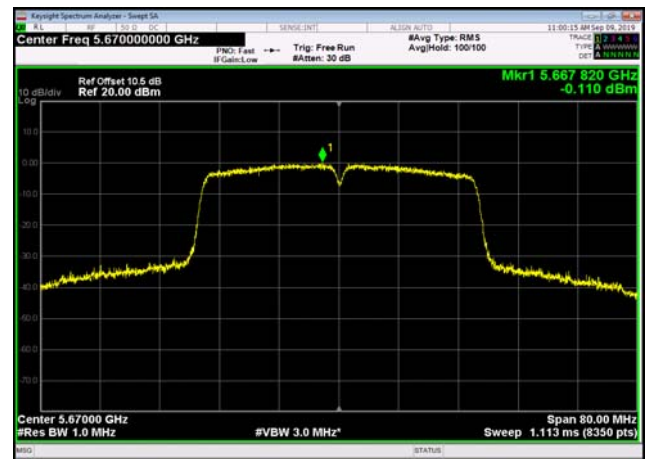
U-NII-2c Power spectral density-802.1
1n(40MHz),5510MHz



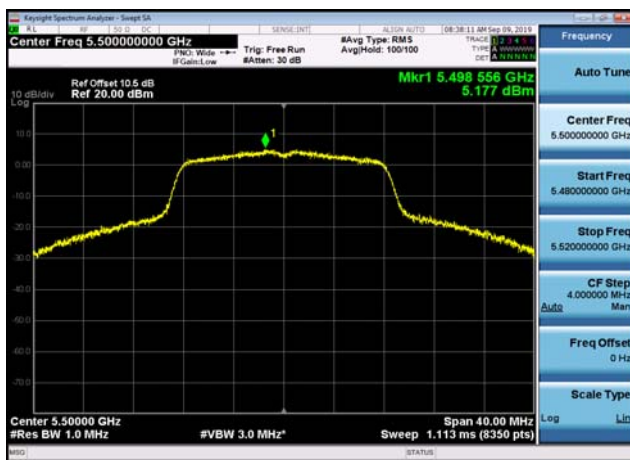
U-NII-2c Power spectral density-802.1
1n(40MHz),5590MHz



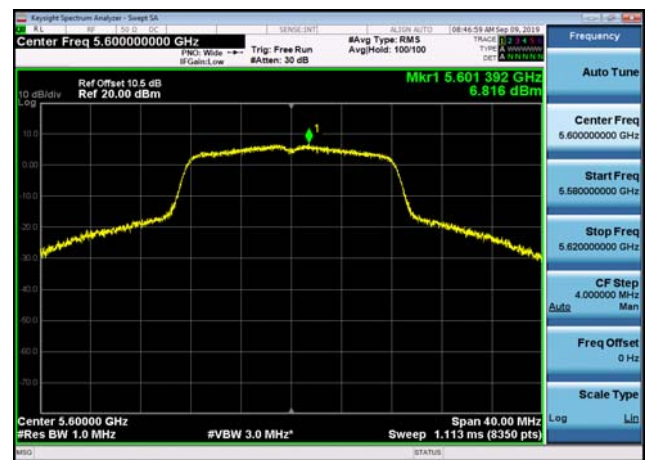
U-NII-2c Power spectral density-802.1
1n(40MHz),5670MHz



U-NII-2c Power spectral density-802.1
1a(20MHz),5500MHz



U-NII-2c Power spectral density-802.1
1a(20MHz),5600MHz



26dB and 99% Occupied Bandwidth

Test Result and Data

U-NII-1 26dB and 99% Occupied Bandwidth				
Mode	Test Frequency (MHz)	26dB down Occupied Bandwidth (MHz)	99% Occupied Bandwidth	Result
802.11n (20MHz)	5180	19.51	17.679	Pass
802.11n (20MHz)	5220	19.62	17.673	Pass
802.11n (20MHz)	5240	19.64	17.648	Pass
802.11n (40MHz)	5190	40.62	36.350	Pass
802.11n (40MHz)	5230	40.51	36.176	Pass
802.11a (20MHz)	5180	26.10	17.224	Pass
802.11a (20MHz)	5220	28.51	17.050	Pass
802.11a (20MHz)	5240	24.82	16.981	Pass

U-NII-2a 26dB Bandwidth and 99% Occupied Bandwidth				
Mode	Test Frequency (MHz)	26dB down Occupied Bandwidth (MHz)	99% Occupied Bandwidth	Result
802.11n (20MHz)	5260	19.63	17.690	Pass
802.11n (20MHz)	5300	19.89	17.652	Pass
802.11n (20MHz)	5320	19.55	17.631	Pass
802.11n (40MHz)	5270	39.53	36.177	Pass
802.11n (40MHz)	5310	40.35	36.143	Pass
802.11a (20MHz)	5260	25.51	16.947	Pass
802.11a (20MHz)	5300	23.74	16.935	Pass
802.11a (20MHz)	5320	22.54	16.940	Pass

U-NII-2c 26dB Bandwidth and 99% Occupied Bandwidth				
Mode	Test Frequency (MHz)	26dB down Occupied Bandwidth (MHz)	99% Occupied Bandwidth	Result
802.11n (20MHz)	5500	19.93	17.798	Pass
802.11n (20MHz)	5600	19.76	17.704	Pass
802.11n (20MHz)	5700	19.84	17.672	Pass
802.11n (40MHz)	5510	58.62	36.402	Pass
802.11n (40MHz)	5590	48.33	36.346	Pass
802.11a (20MHz)	5500	32.44	19.592	Pass
802.11a (20MHz)	5600	31.25	17.438	Pass
802.11a (20MHz)	5700	25.97	16.963	Pass

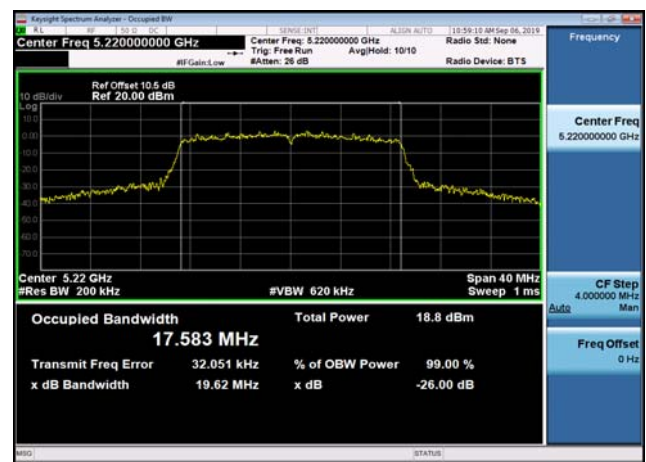
Test Plots

26dB down Bandwidth

U-NII-1 26dB Bandwidth-802.11n(20MHz)
,5180MHz



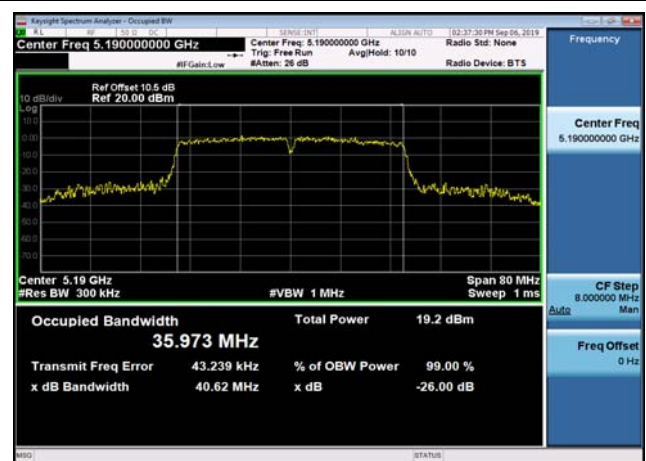
U-NII-1 26dB Bandwidth-802.11n(20MHz)
,5220MHz



U-NII-1 26dB Bandwidth-802.11n(20MHz)
,5240MHz



U-NII-1 26dB Bandwidth-802.11n(40MHz)
,5190MHz



U-NII-1 26dB Bandwidth-802.11n(40MHz)
,5230MHz



U-NII-1 26dB Bandwidth-802.11a(20MHz)
,5180MHz



U-NII-1 26dB Bandwidth-802.11a(20MHz)
,5220MHz



U-NII-1 26dB Bandwidth-802.11a(20MHz)
,5240MHz



U-NII-2a 26dB Bandwidth-802.11n(20MHz)
,5260MHz



U-NII-2a 26dB Bandwidth-802.11n(20MHz)
,5300MHz



U-NII-2a 26dB Bandwidth-802.11n(20MHz)
,5320MHz



U-NII-2a 26dB Bandwidth-802.11n(40MHz)
,5270MHz



U-NII-2a 26dB Bandwidth-802.11n(40MHz
)5310MHz



U-NII-2a 26dB Bandwidth-802.11a(20MHz
)5260MHz



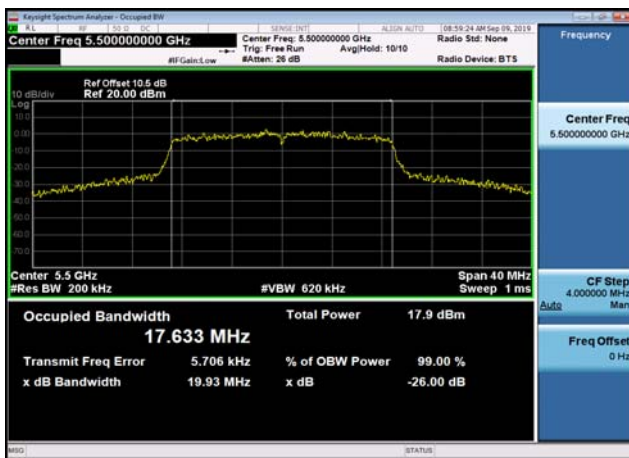
U-NII-2a 26dB Bandwidth-802.11a(20MHz
)5300MHz



U-NII-2a 26dB Bandwidth-802.11a(20MHz
)5320MHz



U-NII-2c 26dB Bandwidth-802.11n(20MHz
)5500MHz



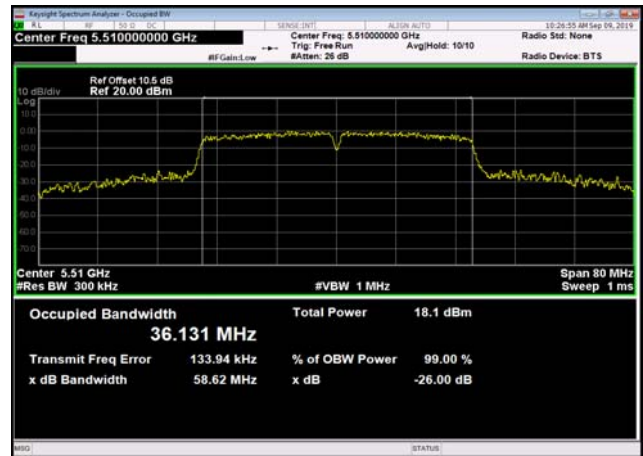
U-NII-2c 26dB Bandwidth-802.11n(20MHz
)5600MHz



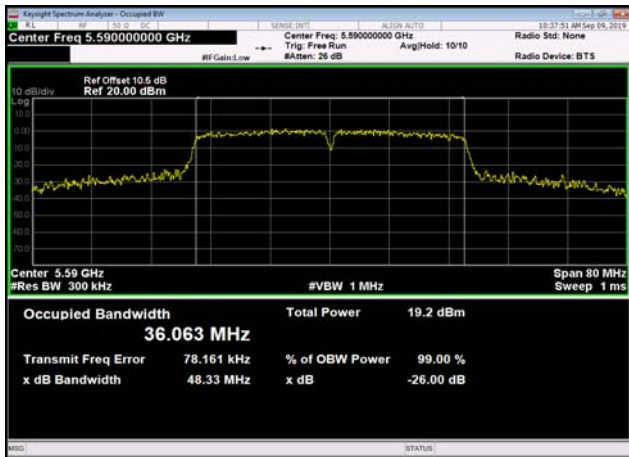
U-NII-2c 26dB Bandwidth-802.11n(20MHz)
,5700MHz



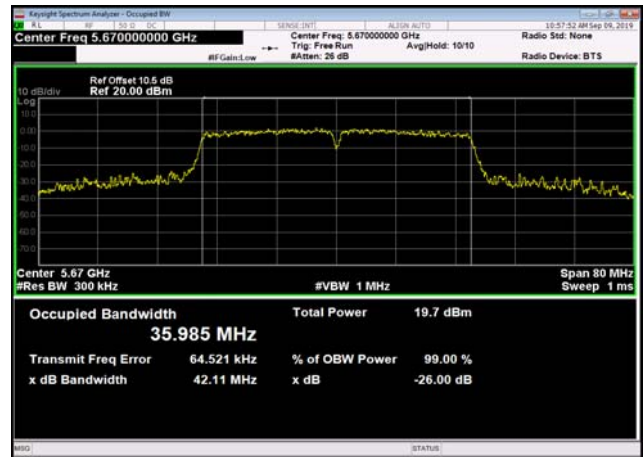
U-NII-2c 26dB Bandwidth-802.11n(40MHz)
,5510MHz



U-NII-2c 26dB Bandwidth-802.11n(40MHz)
,5590MHz



U-NII-2c 26dB Bandwidth-802.11n(40MHz)
,5670MHz



U-NII-2c 26dB Bandwidth-802.11a(20MHz)
,5500MHz



U-NII-2c 26dB Bandwidth-802.11a(20MHz)
,5600MHz



U-NII-2c 26dB Bandwidth-802.11a(20MHz),5700MHz



99% Occupied bandwidth

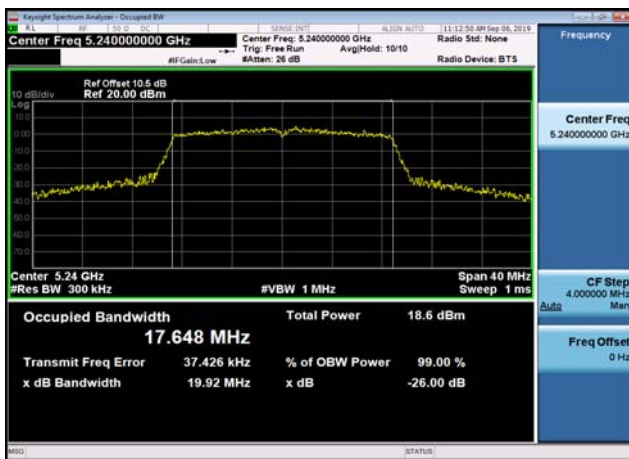
U-NII-1 99% Bandwidth-802.11n(20MHz)
,5180MHz



U-NII-1 99% Bandwidth-802.11n(20MHz)
,5220MHz



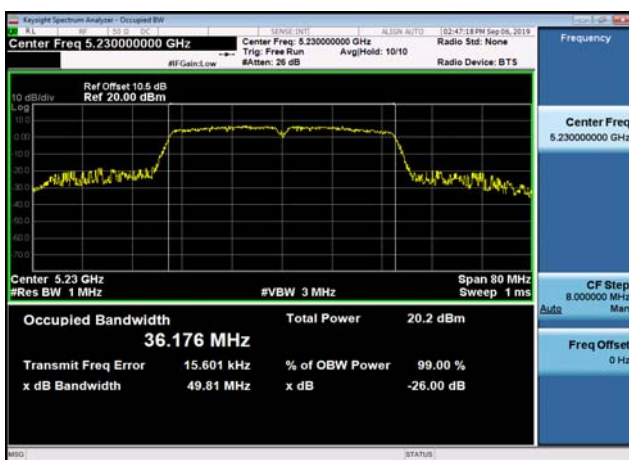
U-NII-1 99% Bandwidth-802.11n(20MHz)
,5240MHz



U-NII-1 99% Bandwidth-802.11n(40MHz)
,5190MHz



U-NII-1 99% Bandwidth-802.11n(40MHz)
,5230MHz



U-NII-1 99% Bandwidth-802.11a(20MHz)
,5180MHz



U-NII-1 99% Bandwidth-802.11a(20MHz)
,5220MHz



U-NII-1 99% Bandwidth-802.11a(20MHz)
,5240MHz



U-NII-2a 99% Bandwidth-802.11n(20MHz)
,5260MHz



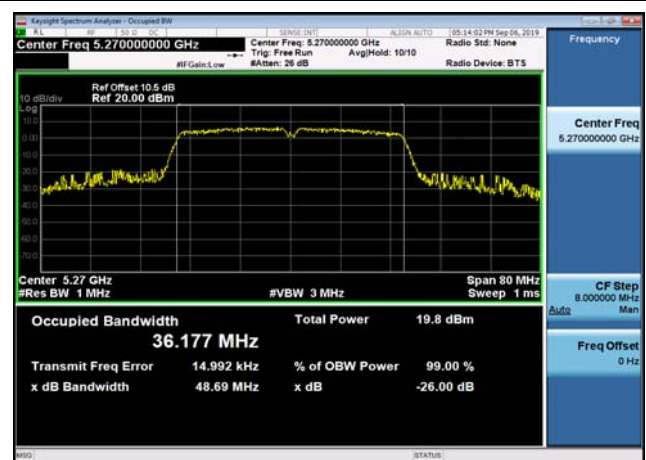
U-NII-2a 99% Bandwidth-802.11n(20MHz)
,5300MHz



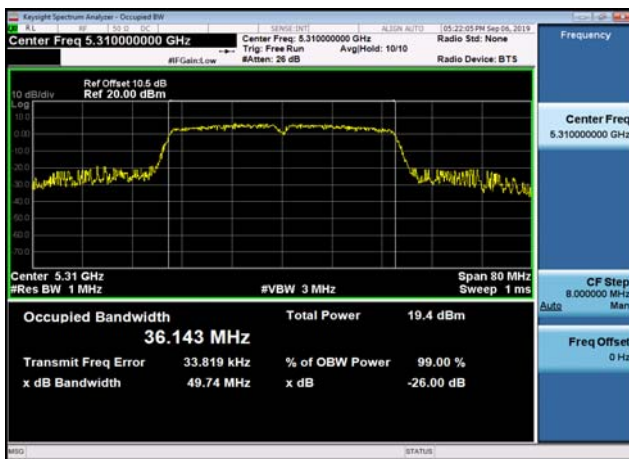
U-NII-2a 99% Bandwidth-802.11n(20MHz)
,5320MHz



U-NII-2a 99% Bandwidth-802.11n(40MHz)
,5270MHz



U-NII-2a 99% Bandwidth-802.11n(40MHz)
,5310MHz



U-NII-2a 99% Bandwidth-802.11a(20MHz)
,5260MHz



U-NII-2a 99% Bandwidth-802.11a(20MHz)
,5300MHz



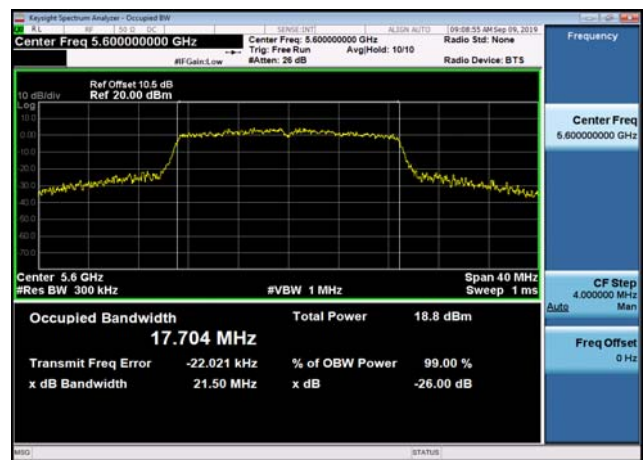
U-NII-2a 99% Bandwidth-802.11a(20MHz)
,5320MHz



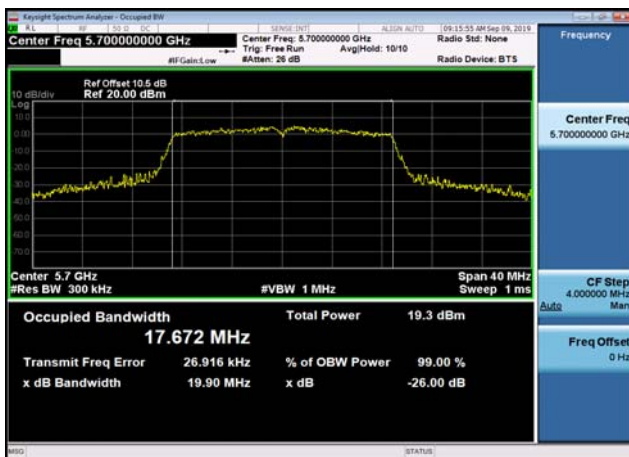
U-NII-2c 99% Bandwidth-802.11n(20MHz)
,5500MHz



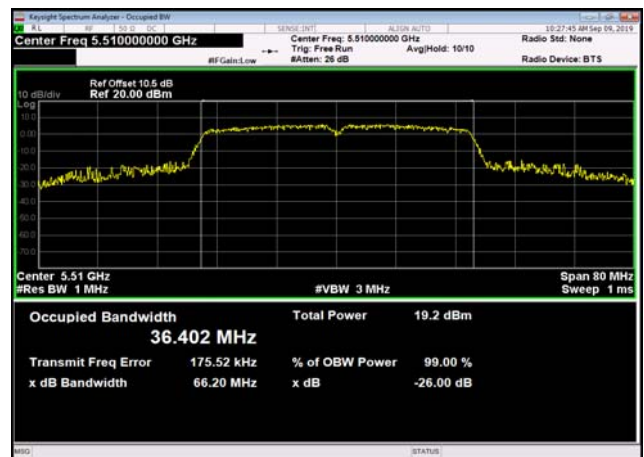
U-NII-2c 99% Bandwidth-802.11n(20MHz)
,5600MHz



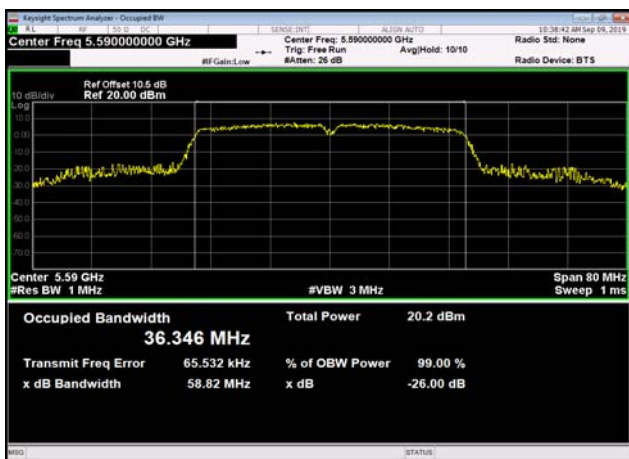
U-NII-2c 99% Bandwidth-802.11n(20MHz)
,5700MHz



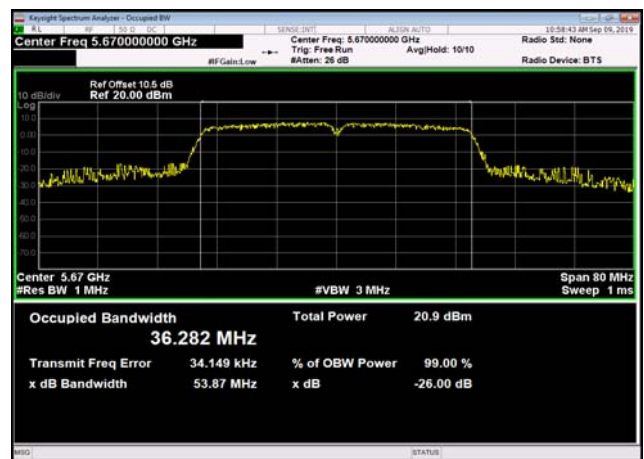
U-NII-2c 99% Bandwidth-802.11n(40MHz)
,5510MHz



U-NII-2c 99% Bandwidth-802.11n(40MHz)
,5590MHz



U-NII-2c 99% Bandwidth-802.11n(40MHz)
,5670MHz



U-NII-2c 99% Bandwidth-802.11a(20MHz)
,5500MHz



U-NII-2c 99% Bandwidth-802.11a(20MHz)
,5600MHz



U-NII-2c 99% Bandwidth-802.11a(20MHz) ,5700MHz



U-NII-2c 99% Bandwidth-802.11ac(20MHz) ,5500MHz



Frequency Stability

Mode	Test Frequency (MHz)	LF (MHz)	HF (MHz)	CF (MHz)	Freq Stability (ppm)	Test Result
802.11n (20MHz)	5180	5171.132	5188.903	5180.018	3.380	Pass
802.11n (20MHz)	5220	5211.136	5228.888	5220.012	2.230	Pass
802.11n (20MHz)	5240	5231.122	5248.890	5240.006	1.110	Pass
802.11n (40MHz)	5190	5171.855	5208.191	5190.023	4.340	Pass
802.11n (40MHz)	5230	5211.862	5248.191	5230.026	5.020	Pass
802.11a (20MHz)	5180	5171.737	5188.273	5180.005	0.970	Pass
802.11a (20MHz)	5220	5211.722	5228.285	5220.003	0.640	Pass
802.11a (20MHz)	5240	5231.796	5248.261	5240.028	5.410	Pass
802.11n (20MHz)	5260	5251.105	5268.912	5260.008	1.580	Pass
802.11n (20MHz)	5300	5291.124	5308.908	5300.016	3.070	Pass
802.11n (20MHz)	5320	5311.212	5328.824	5320.018	3.370	Pass
802.11n (40MHz)	5270	5251.868	5288.182	5270.025	4.700	Pass
802.11n (40MHz)	5310	5291.859	5328.195	5310.027	5.080	Pass
802.11a (20MHz)	5260	5251.824	5268.226	5260.025	4.750	Pass
802.11a (20MHz)	5300	5291.728	5308.269	5299.998	-0.310	Pass
802.11a (20MHz)	5320	5311.758	5328.280	5320.019	3.600	Pass
802.11n (20MHz)	5500	5491.120	5508.901	5500.010	1.890	Pass
802.11n (20MHz)	5600	5591.170	5608.814	5599.992	-1.410	Pass
802.11n (20MHz)	5700	5691.202	5708.838	5700.020	3.510	Pass

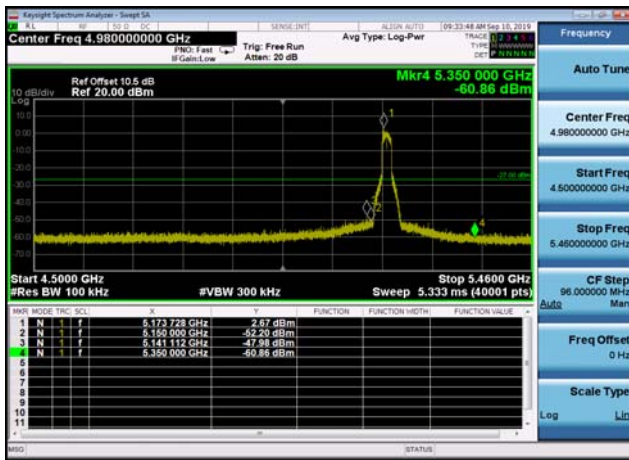


802.11n (40MHz)	5510	5491.862	5528.195	5510.029	5.170	Pass
802.11n (40MHz)	5590	5571.847	5608.194	5590.020	3.620	Pass
802.11n (40MHz)	5670	5651.852	5688.198	5670.025	4.370	Pass
802.11a (20MHz)	5500	5491.785	5508.248	5500.016	2.950	Pass
802.11a (20MHz)	5600	5591.703	5608.249	5599.976	-4.320	Pass
802.11a (20MHz)	5700	5691.748	5708.274	5700.011	1.970	Pass

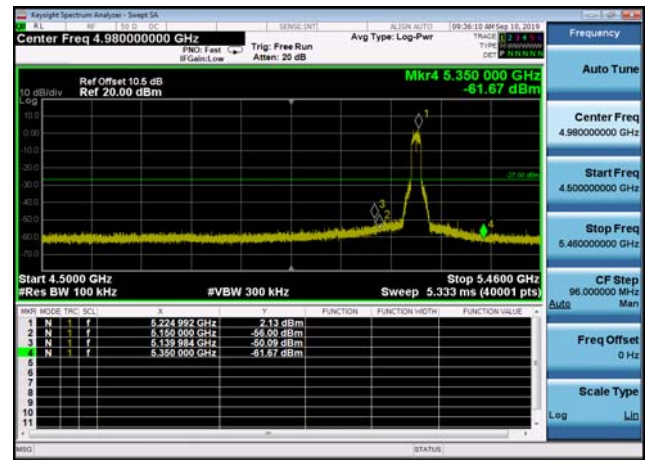
Note: The worst data reported only.

Bandedge

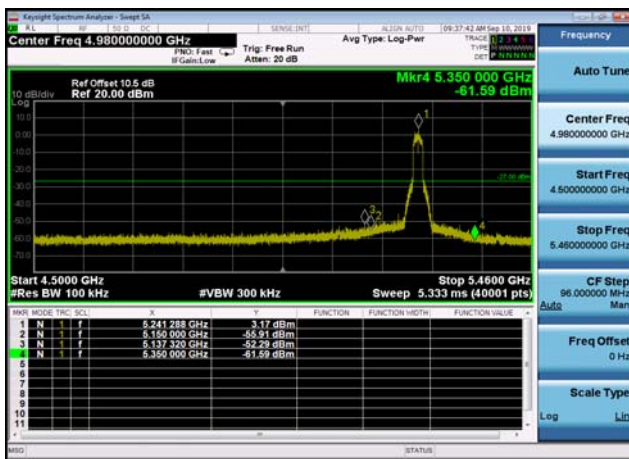
U-NII-1 Band Edge-802.11n(20MHz)
,5180MHz



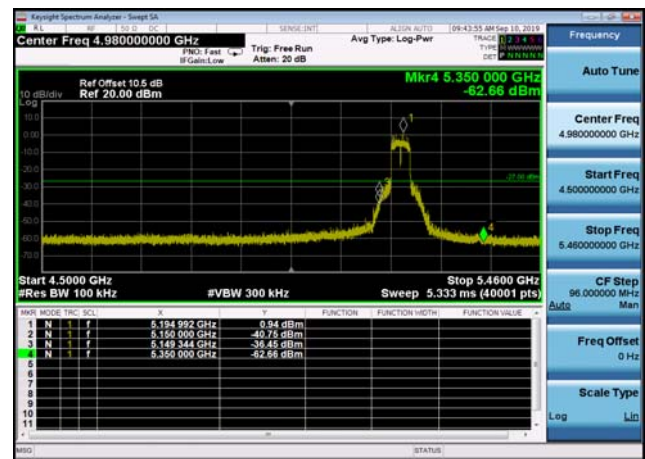
U-NII-1 Band Edge-802.11n(20MHz)
,5220MHz



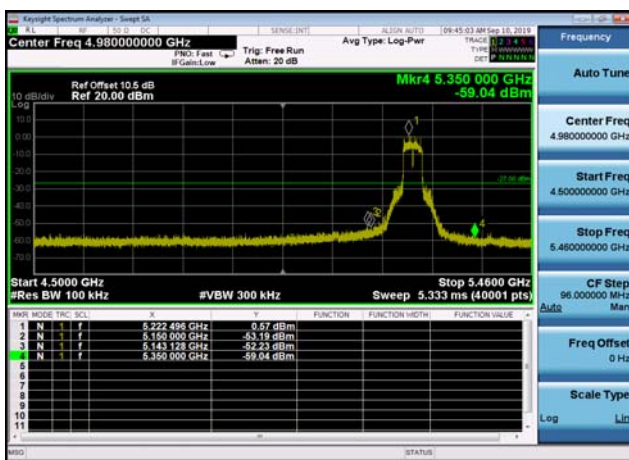
U-NII-1 Band Edge-802.11n(20MHz)
,5240MHz



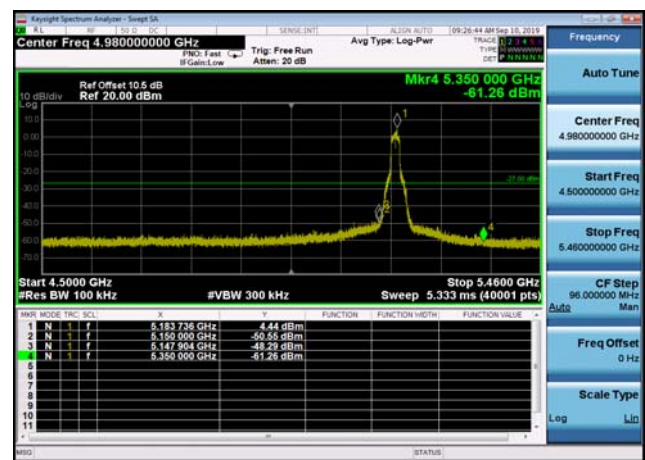
U-NII-1 Band Edge-802.11n(40MHz)
,5190MHz



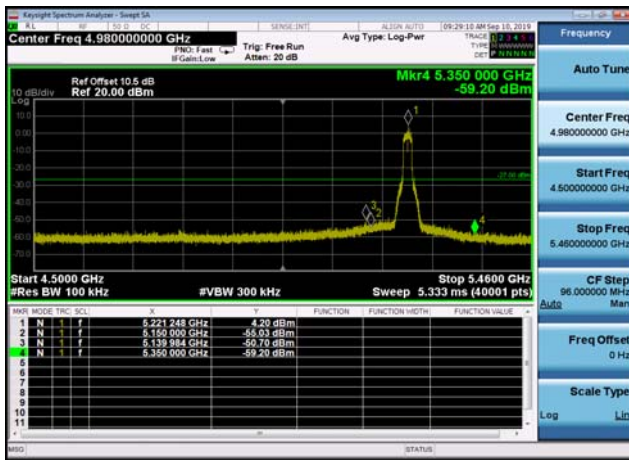
U-NII-1 Band Edge-802.11n(40MHz)
,5230MHz



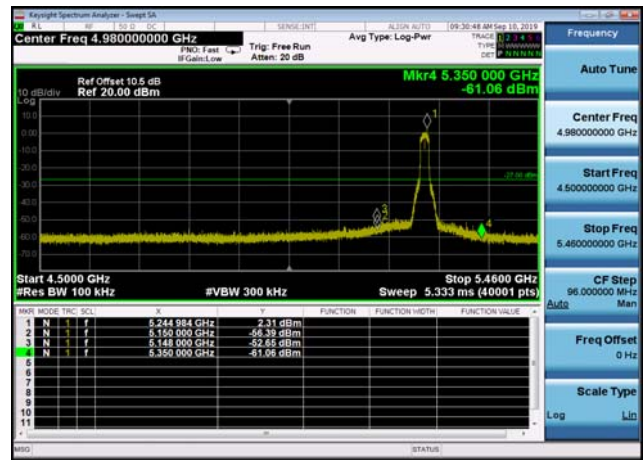
U-NII-1 Band Edge-802.11a(20MHz)
,5180MHz



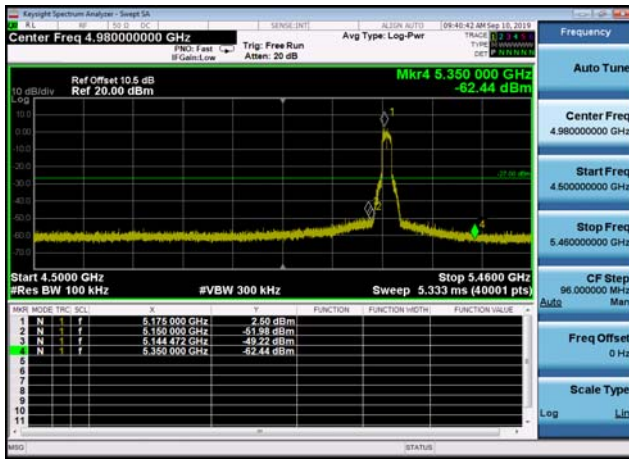
U-NII-1 Band Edge-802.11a(20MHz)
,5220MHz



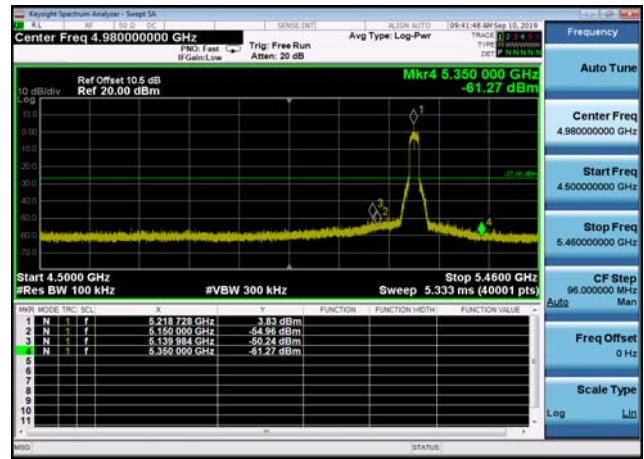
U-NII-1 Band Edge-802.11a(20MHz)
,5240MHz



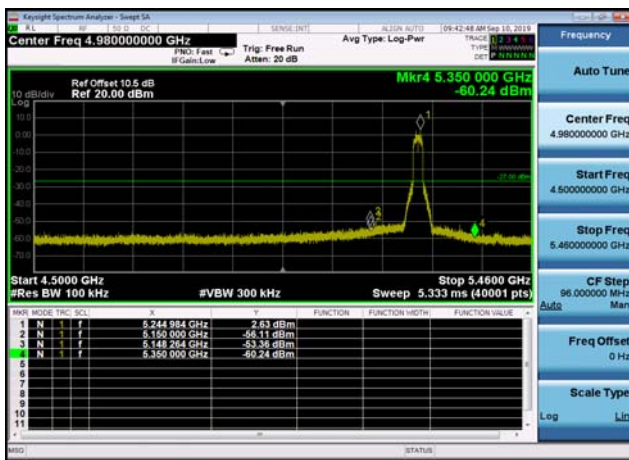
U-NII-1 Band Edge-802.11ac(20MHz)
,5180MHz



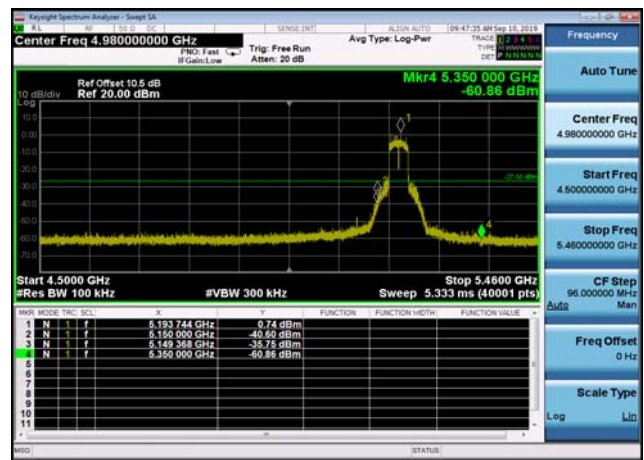
U-NII-1 Band Edge-802.11ac(20MHz)
,5220MHz



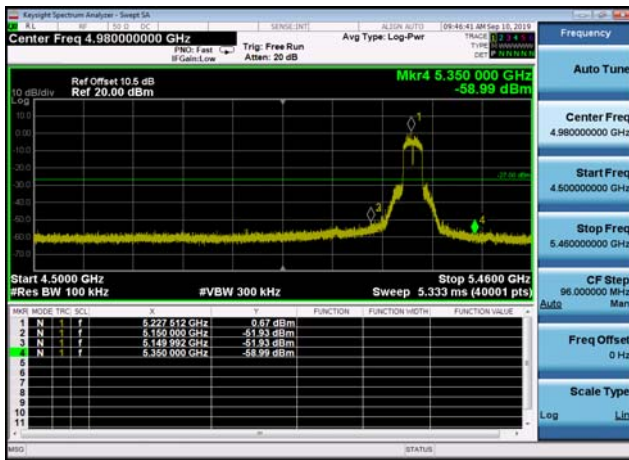
U-NII-1 Band Edge-802.11ac(20MHz)
,5240MHz



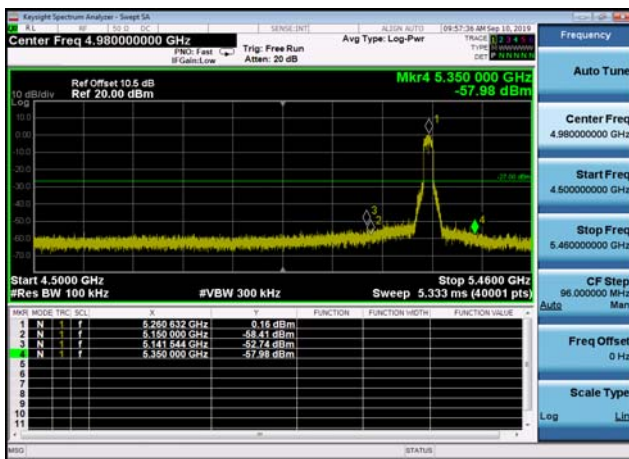
U-NII-1 Band Edge-802.11ac(40MHz)
,5190MHz



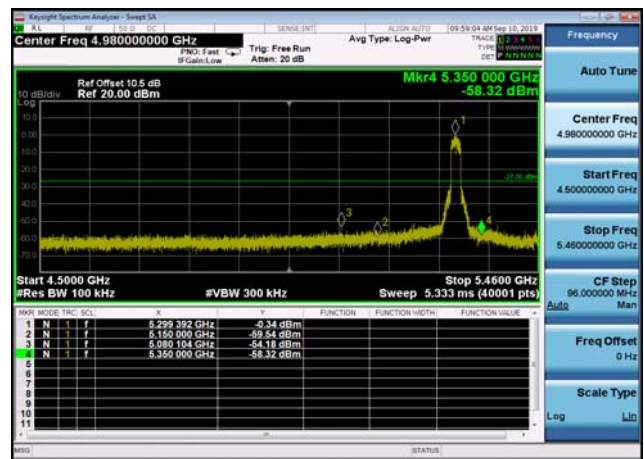
U-NII-1 Band Edge-802.11ac(40MHz)
,5230MHz



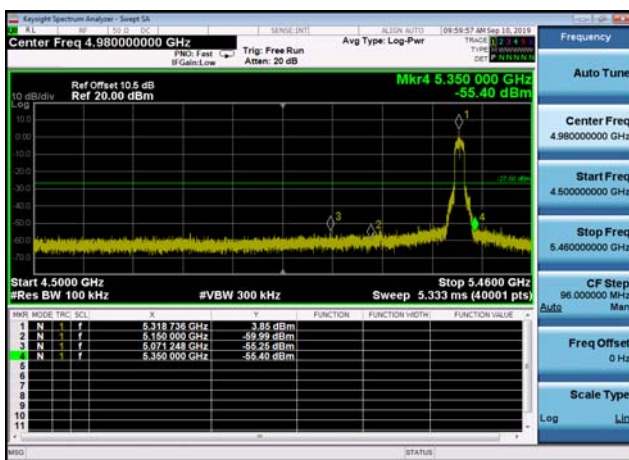
U-NII-2a Band Edge-802.11n(20MHz)
,5260MHz



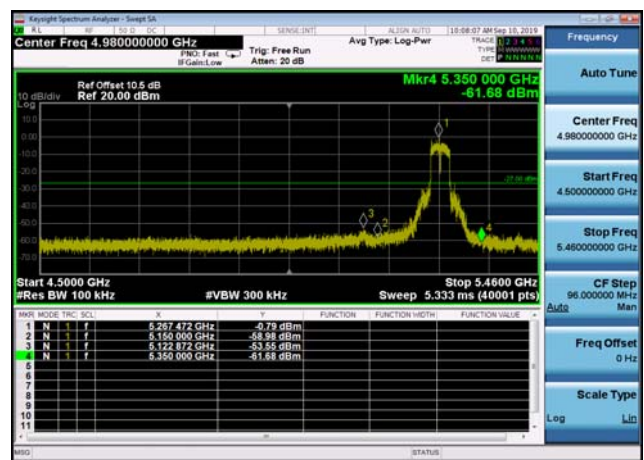
U-NII-2a Band Edge-802.11n(20MHz)
,5300MHz



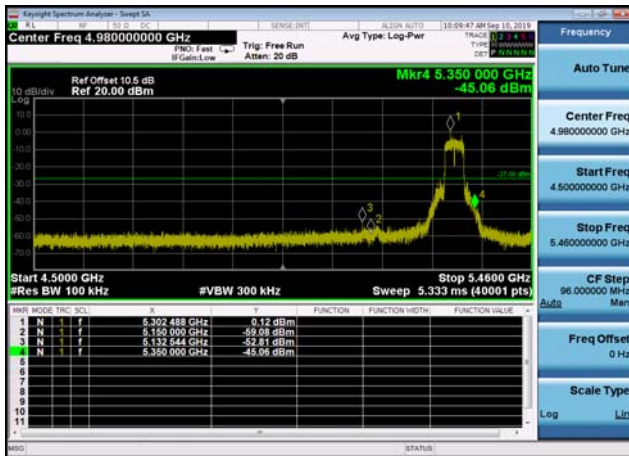
U-NII-2a Band Edge-802.11n(20MHz)
,5320MHz



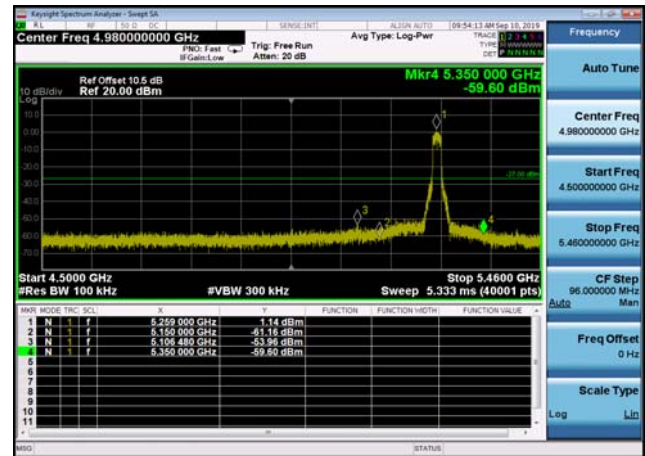
U-NII-2a Band Edge-802.11n(40MHz)
,5270MHz



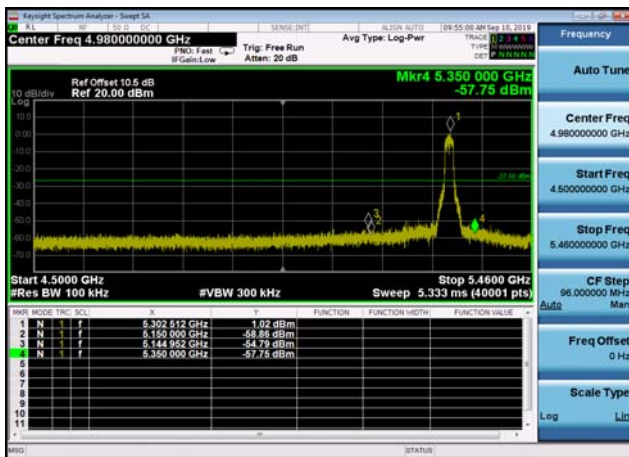
U-NII-2a Band Edge-802.11n(40MHz)
,5310MHz



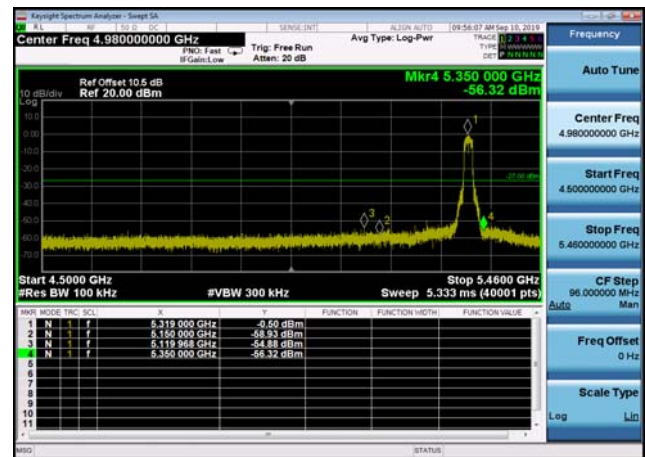
U-NII-2a Band Edge-802.11a(20MHz)
,5260MHz



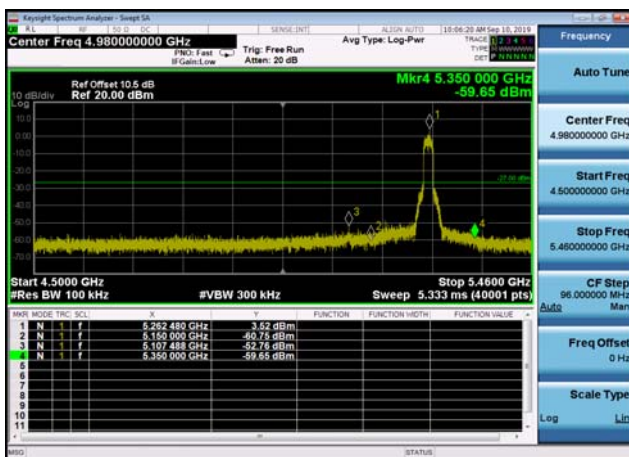
U-NII-2a Band Edge-802.11a(20MHz)
,5300MHz



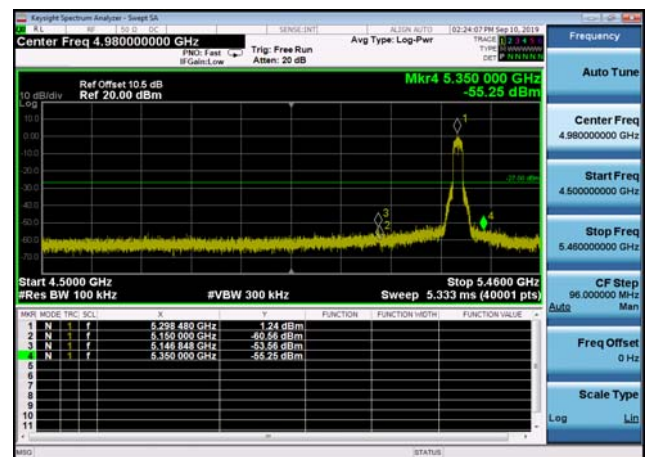
U-NII-2a Band Edge-802.11a(20MHz)
,5320MHz



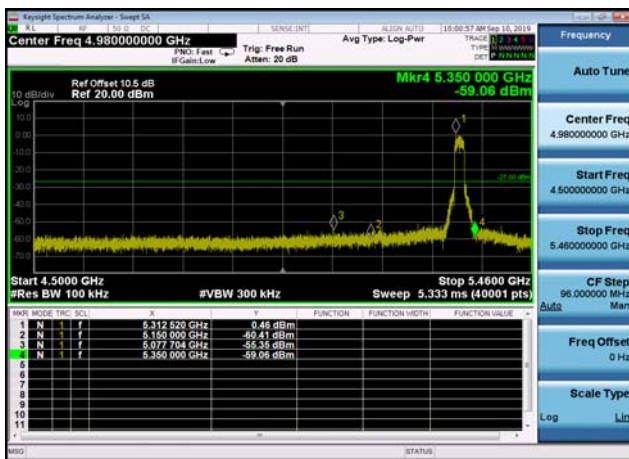
U-NII-2a Band Edge-802.11ac(20MHz)
,5260MHz



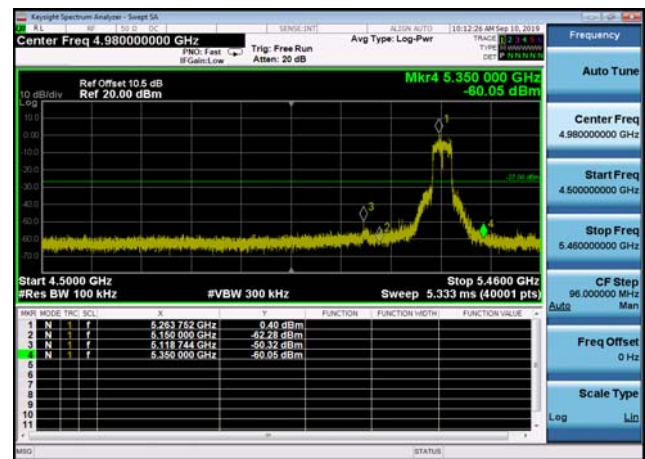
U-NII-2a Band Edge-802.11ac(20MHz)
,5300MHz



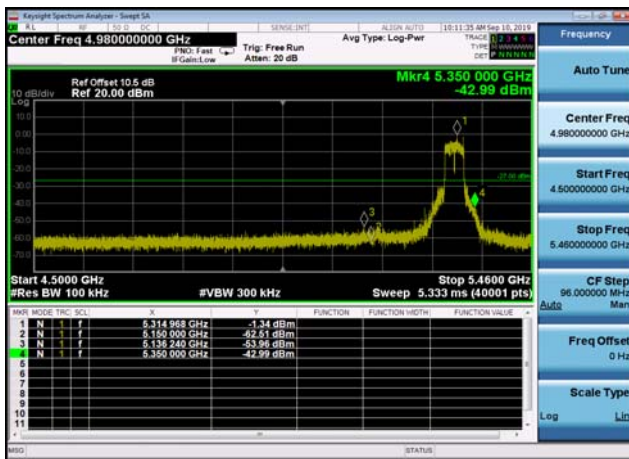
U-NII-2a Band Edge-802.11ac(20MHz)
,5320MHz



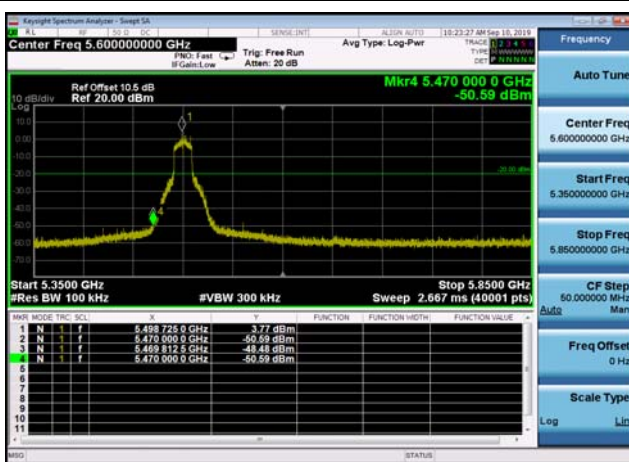
U-NII-2a Band Edge-802.11ac(40MHz)
,5270MHz



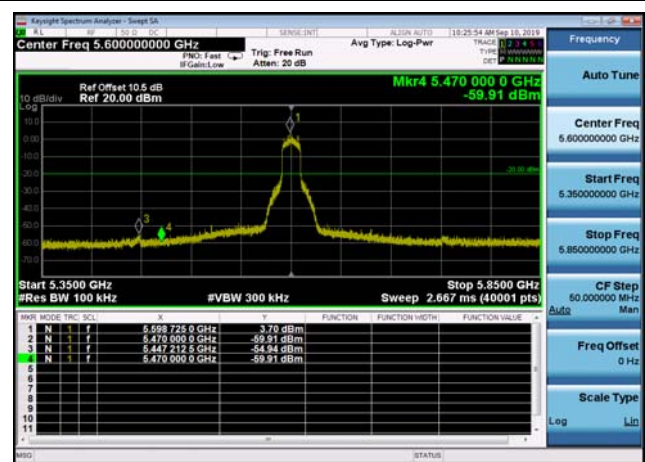
U-NII-2a Band Edge-802.11ac(40MHz)
,5310MHz



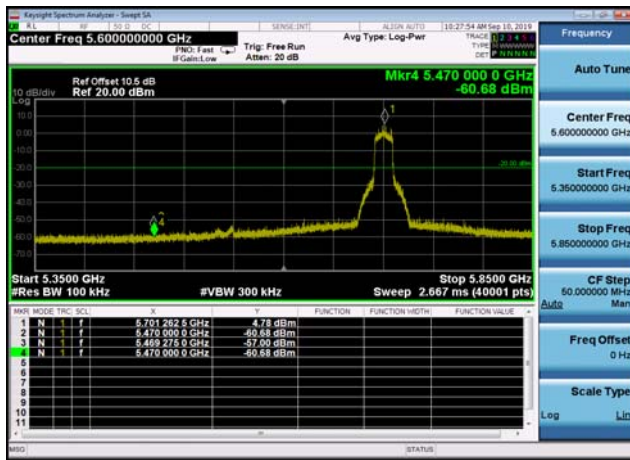
U-NII-2c Band Edge-802.11n(20MHz)
,5500MHz



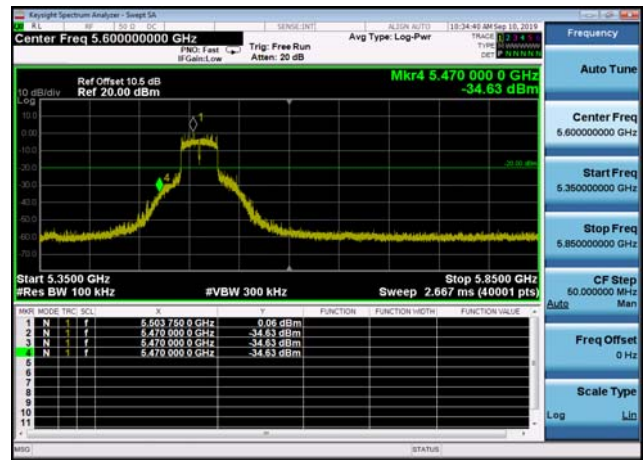
U-NII-2c Band Edge-802.11n(20MHz)
,5600MHz



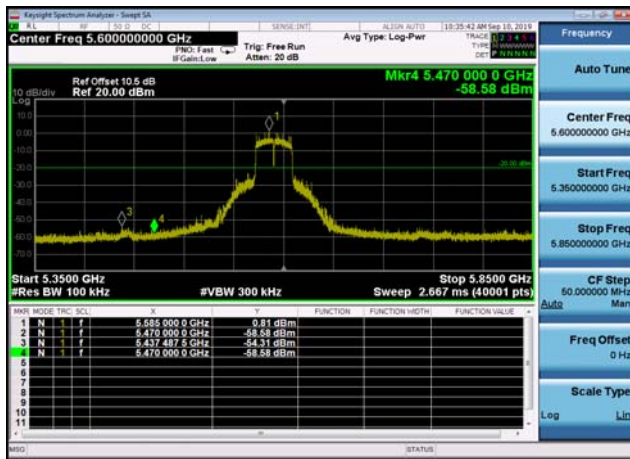
U-NII-2c Band Edge-802.11n(20MHz)
,5700MHz



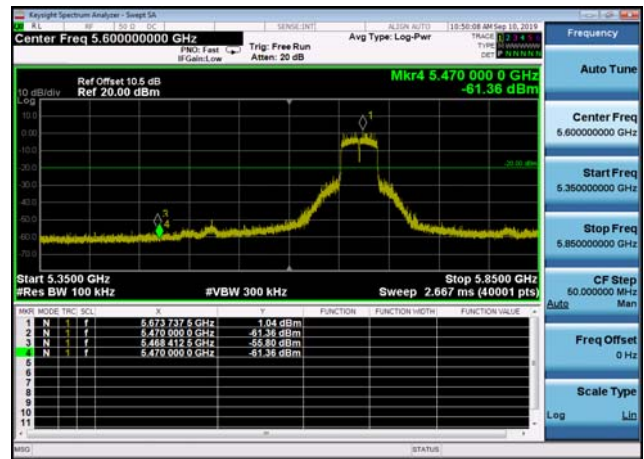
U-NII-2c Band Edge-802.11n(40MHz)
,5510MHz



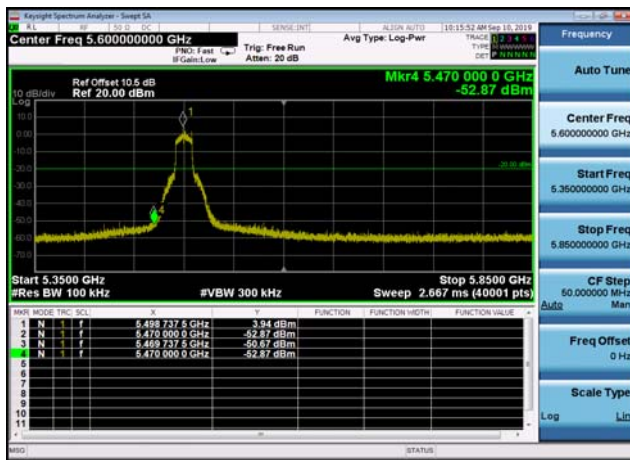
U-NII-2c Band Edge-802.11n(40MHz)
,5590MHz



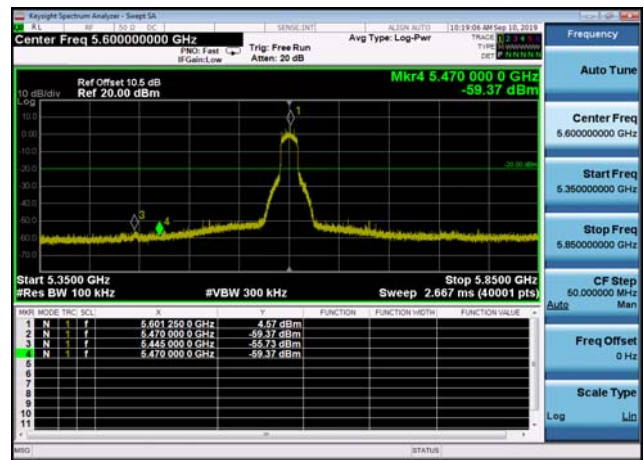
U-NII-2c Band Edge-802.11n(40MHz)
,5670MHz



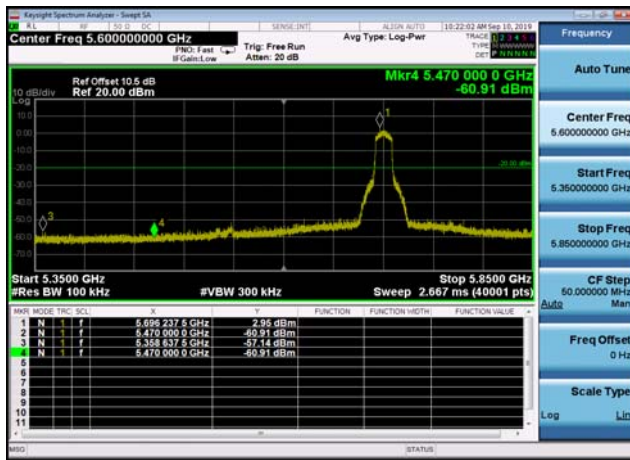
U-NII-2c Band Edge-802.11a(20MHz)
,5500MHz



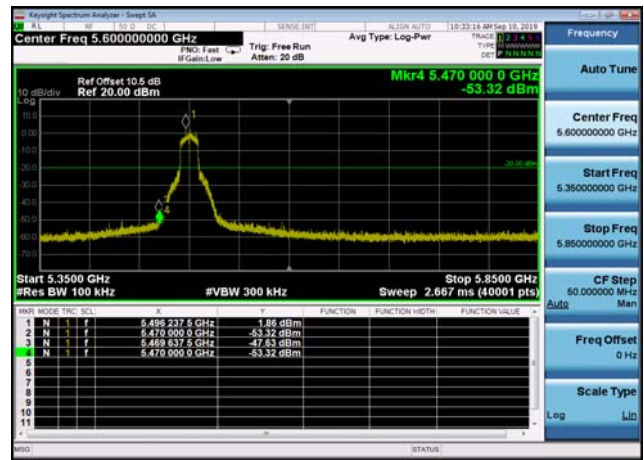
U-NII-2c Band Edge-802.11a(20MHz)
,5600MHz



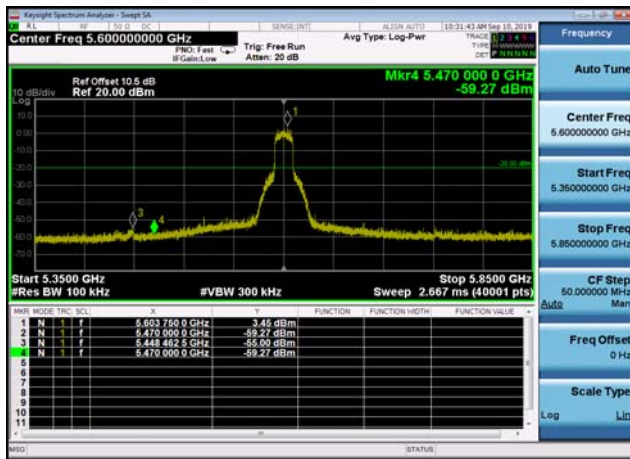
U-NII-2c Band Edge-802.11a(20MHz)
,5700MHz



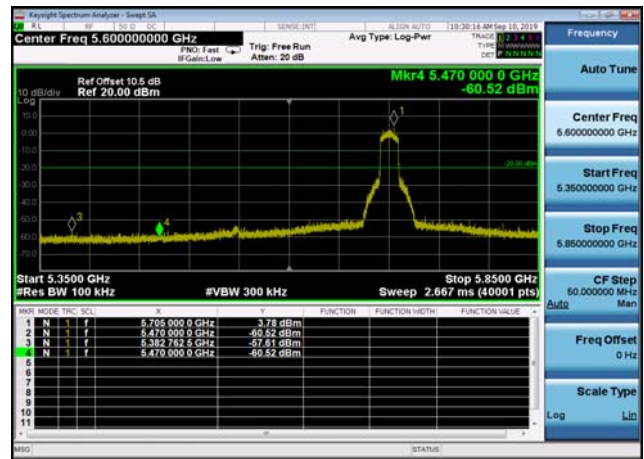
U-NII-2c Band Edge-802.11ac(20MHz)
,5500MHz



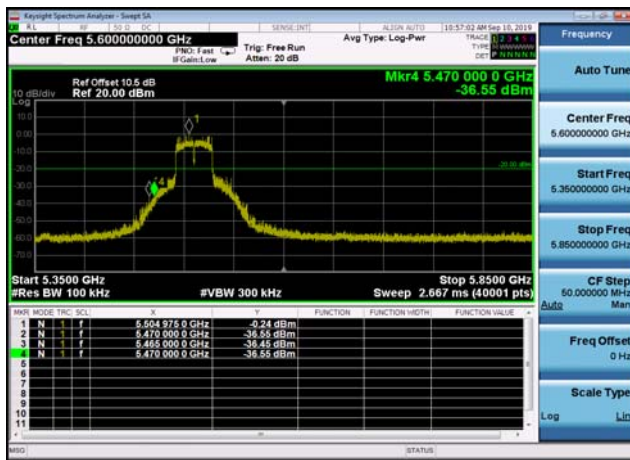
U-NII-2c Band Edge-802.11ac(20MHz)
,5600MHz



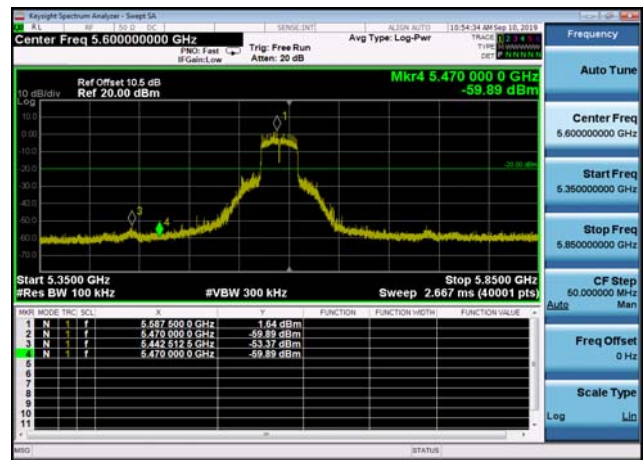
U-NII-2c Band Edge-802.11ac(20MHz)
,5700MHz



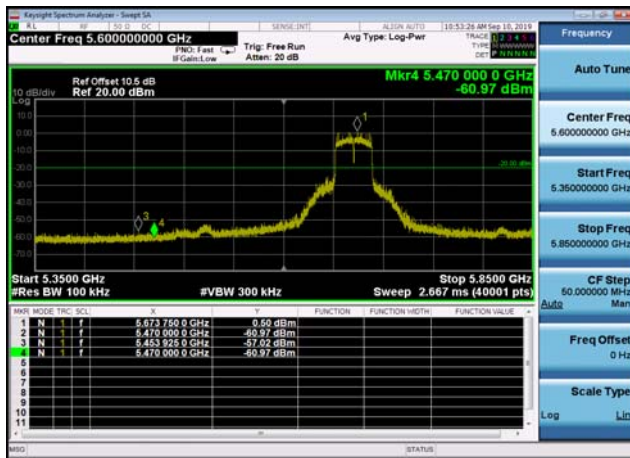
U-NII-2c Band Edge-802.11ac(40MHz)
,5510MHz



U-NII-2c Band Edge-802.11ac(40MHz)
,5590MHz



U-NII-2c Band Edge-802.11ac(40MHz)
,5670MHz



** END OF REPORT **