

FCC 47 CFR PART 15 SUBPART E

Product Type : Access Point
Applicant : Ubiquiti Networks, Inc.
Address : 2580 Orchard Parkway, San Jose, California, United States, 95131
Trade Name : UBIQUITI
Model Number : UAP-AC-PRO
Test Specification : FCC 47 CFR PART 15 SUBPART E: Oct., 2014
ANSI C63.10-2013
Application Purpose : Original
Receive Date : Apr. 08, 2015
Test Period : Jul. 09 ~ Sep. 02, 2015
Issue Date : Sep. 03, 2015

Issue by

A Test Lab Techno Corp.
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Taiwan Accreditation Foundation accreditation number: 1330

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Revision History

Rev.	Issue Date	Revisions	Revised By
00	Aug. 28, 2015	Initial Issue	
01	Sep. 03, 2015	Revised report information.	Joyce Liao

Verification of Compliance

Issued Date: 09/03/2015

Product Type : Access Point
Applicant : Ubiquiti Networks, Inc.
Address : 2580 Orchard Parkway, San Jose, California, United States, 95131
Trade Name : UBIQUITI
Model Number : UAP-AC-PRO
FCC ID : SWX-UAPACPRO
EUT Rated Voltage : DC 48V, 0.5A
Test Voltage : 120 Vac / 60 Hz
Applicable Standard : FCC 47 CFR PART 15 SUBPART E: Oct., 2014
ANSI C63.10-2013

Test Result : Complied

Application Purpose : Original

Performing Lab. : A Test Lab Techno Corp.

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<http://www.atl-lab.com.tw/e-index.htm>



A Test Lab Techno Corp. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by A Test Lab Techno Corp. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

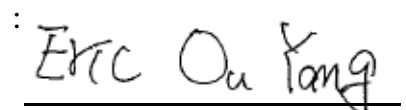
Approved By :



(Manager)

(Fly Lu)

Reviewed By :



(Testing Engineer)

(Eric Ou Yang)

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1 General Information

1.1. Summary of Test Result

Standard	Item	Result	Remark
FCC			
15.407(b)(6) 15.207	AC Power Conducted Emission	PASS	---
15.407(b) 15.205 / 15.209	Transmitter Radiated Emissions	PASS	---
15.407(a)	Maximum Conducted Output Power	PASS	---
15.407(a)	26dB RF Bandwidth	Reference	---
15.407(a)	6dB RF Bandwidth	PASS	----
15.407(a)	Peak Power Spectral Density	PASS	---
15.407(g)	Frequency Stability	PASS	---
15.407(a) 15.203	Antenna Requirement	PASS	---

The test results of this report relate only to the tested sample(s) identified in this report. Manufacturer or whom it may concern should recognize the pass or fail of the test result.

1.2. Measurement Uncertainty

Measurement Item	Frequency Range		Uncertainty (dB)
Conducted Emission	9kHz ~ 30MHz		± 2.020
Radiated Emission	30MHz ~ 1000MHz	Horizontal	± 3.960
		Vertical	± 3.570
	1000MHz ~ 18000MHz	Horizontal	± 3.072
		Vertical	± 3.028
	18000MHz ~ 40000MHz	Horizontal	± 3.622
		Vertical	± 3.506

2 EUT Description

Product Type	Access Point			
Trade Name	UBIQUITI			
Model No.	UAP-AC-PRO			
Applicant	Ubiquiti Networks, Inc. 2580 Orchard Parkway, San Jose, California, United States, 95131			
Manufacturer	Ubiquiti Networks, Inc. 2580 Orchard Parkway, San Jose, California, United States, 95131			
FCC ID	SWX-UAPACPRO			
Frequency Range	Mode	Band	Frequency Range (MHz)	Number of Channels
	IEEE 802.11a	U-NII Band I	5180 – 5240	4 Channels
		U-NII Band III	5745 – 5825	5 Channels
	IEEE 802.11n 20 MHz	U-NII Band I	5180 – 5220	4 Channels
		U-NII Band III	5745 – 5825	5 Channels
	IEEE 802.11n 40 MHz	U-NII Band I	5190 – 5230	2 Channels
		U-NII Band III	5755 – 5795	2 Channels
	IEEE 802.11ac 80 MHz	U-NII Band I	5210	1 Channel
		U-NII Band III	5775	1 Channel
Modulation Type	OFDM			
Antenna Type	Dual-Band Antennas			
Antenna Max. Gain	3 dBi			
Antenna Delivery	3TX + 3RX			
RF Output Power	IEEE 802.11a	U-NII Band I:	0.149 W / 21.73 dBm	
	IEEE 802.11a	U-NII Band III:	0.178 W / 22.49 dBm	
	IEEE 802.11n 20 MHz	U-NII Band I:	0.147 W / 21.68 dBm	
	IEEE 802.11n 20 MHz	U-NII Band III:	0.185 W / 22.67 dBm	
	IEEE 802.11n 40 MHz	U-NII Band I:	0.064 W / 18.05 dBm	
	IEEE 802.11n 40 MHz	U-NII Band III:	0.152 W / 21.81 dBm	
	IEEE 802.11ac 80 MHz	U-NII Band I:	0.036 W / 15.59 dBm	
	IEEE 802.11ac 80 MHz	U-NII Band III:	0.078 W / 18.94 dBm	
Frequency stability specification	± 30 ppm			
Temperature Range	-10 ~ 70 °C			

3 Test Methodology

3.1. Mode of Operation

Decision of Test ATL has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: Normal Operation Mode
Mode 2: IEEE 802.11a Link Mode
Mode 3: IEEE 802.11n 20MHz Link Mode
Mode 4: IEEE 802.11n 40MHz Link Mode
Mode 5: IEEE 802.11ac 80MHz Link Mode

Software used to control the EUT for staying in continuous transmitting mode was programmed.

After verification, all tests were carried out with the worst case test modes as shown below except radiated spurious emission below 1GHz and power line conducted emissions below 30MHz, which worst case was in normal link mode only.

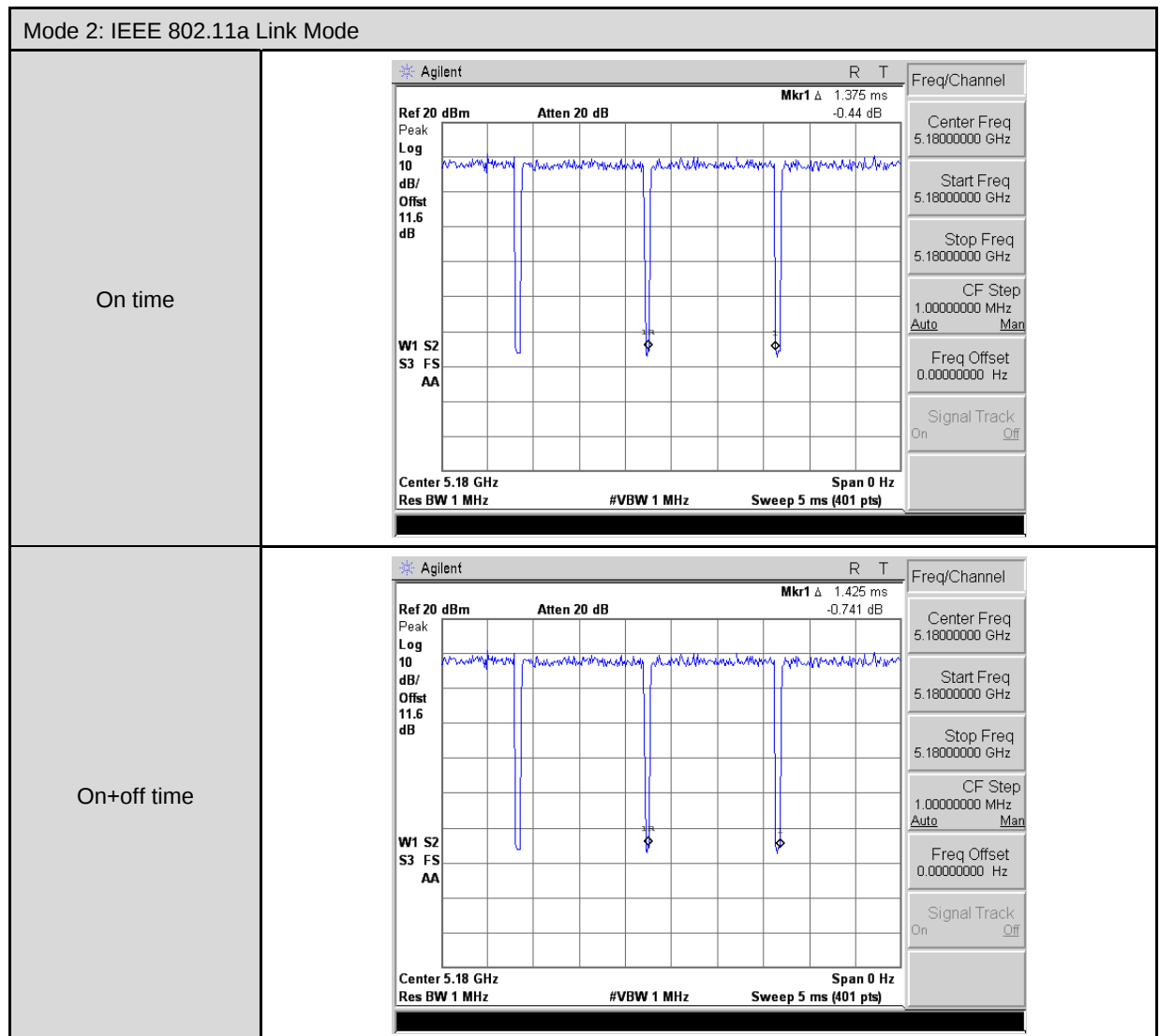
Test Mode	ANT-0	ANT-1	ANT-2	ANT-1+2
IEEE 802.11a Link Mode	V	V	V	V
IEEE 802.11n 20MHz Link Mode	V	V	V	V
IEEE 802.11n 40MHz Link Mode	V	V	V	V
IEEE 802.11ac 80MHz Link Mode	V	V	V	V

Test Mode	Band	Data Rate	Test Channel
IEEE 802.11a Link Mode	U-NII Band I	6M	36, 40, 48
	U-NII Band III		149,157,165
IEEE 802.11n 20MHz Link Mode	U-NII Band I	19.5M	36, 40, 48
	U-NII Band III		149,157,165
IEEE 802.11n 40MHz Link Mode	U-NII Band I	40.5M	38, 46
	U-NII Band III		151,159
IEEE 802.11ac 80MHz Link Mode	U-NII Band I	87.9M	42
	U-NII Band III		155

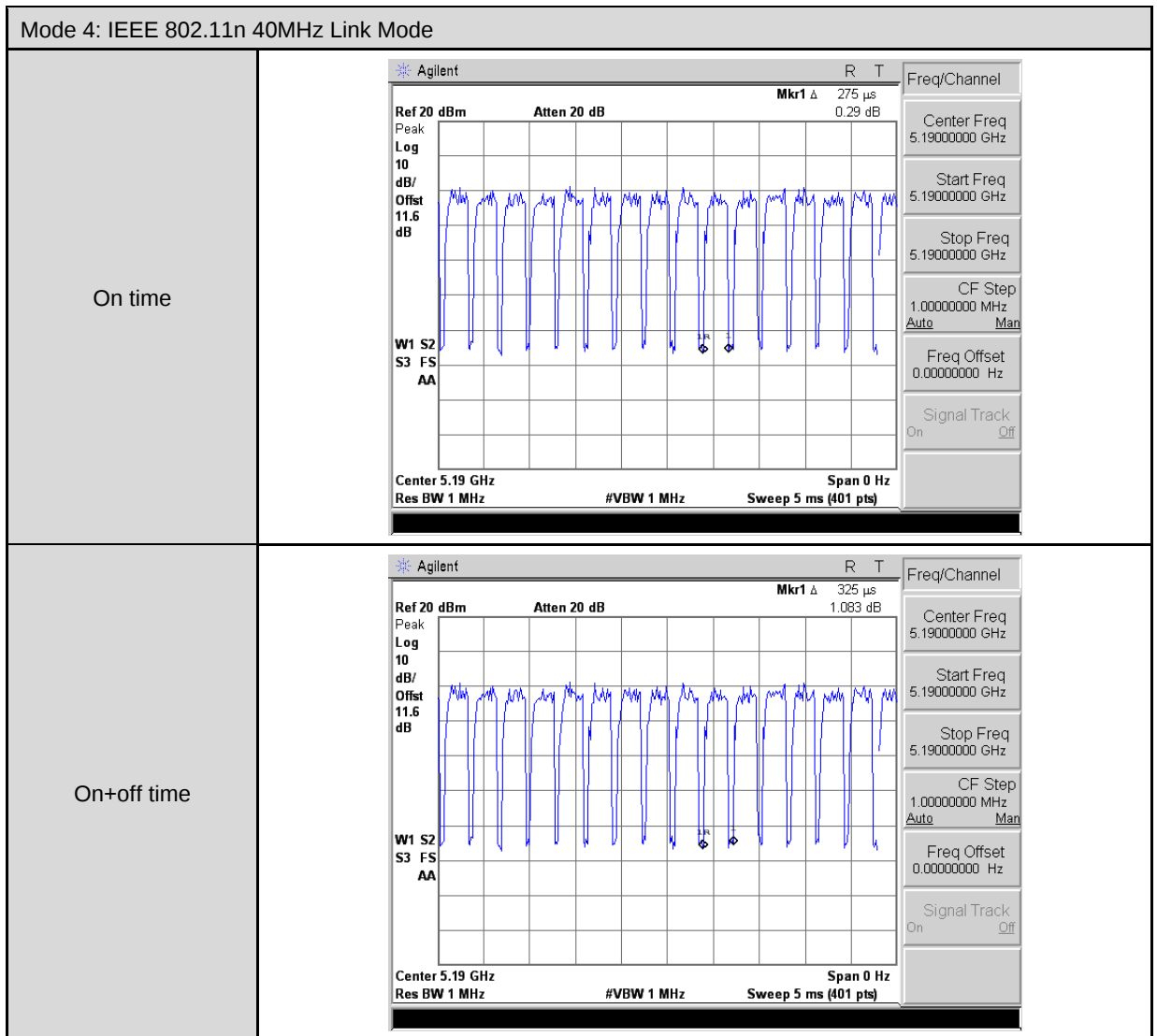
Duty cycle

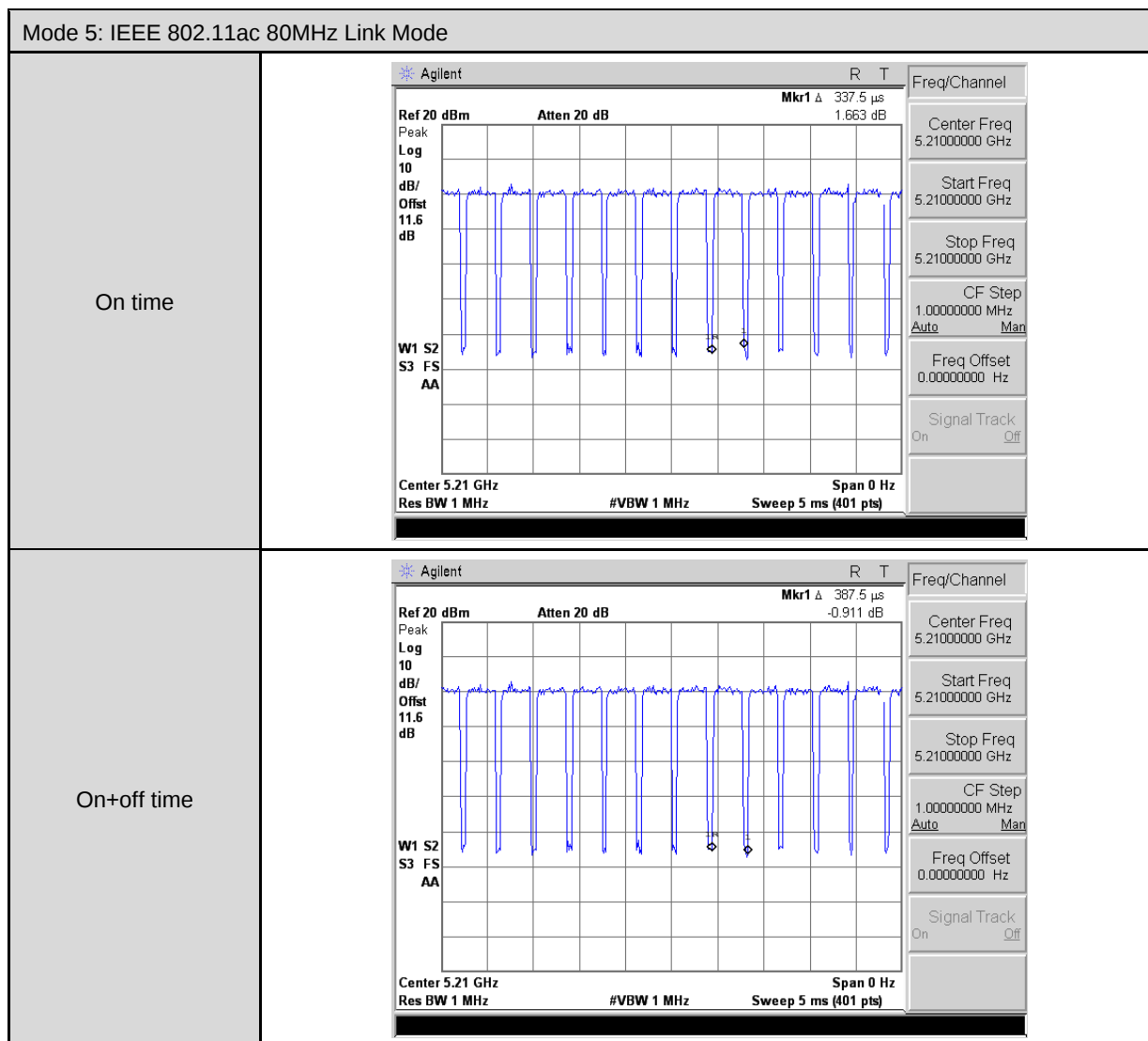
Test Mode	Frequency (MHz)	on time (ms)	on+off time (ms)	Duty cycle	Duty Factor (dB)	1/T Minimum VBW (kHz)
Mode 2: IEEE 802.11a Link Mode	5180.0	1.375	1.425	0.965	0.155	0.727
Mode 3: IEEE 802.11n 20MHz Link Mode	5180.0	0.488	0.525	0.929	0.322	2.051
Mode 4: IEEE 802.11n 40MHz Link Mode	5190.0	0.275	0.325	0.846	0.726	3.636
Mode 5: IEEE 802.11ac 80MHz Link Mode	5210.0	0.338	0.388	0.871	0.600	2.963

Duty Cycle Graphs









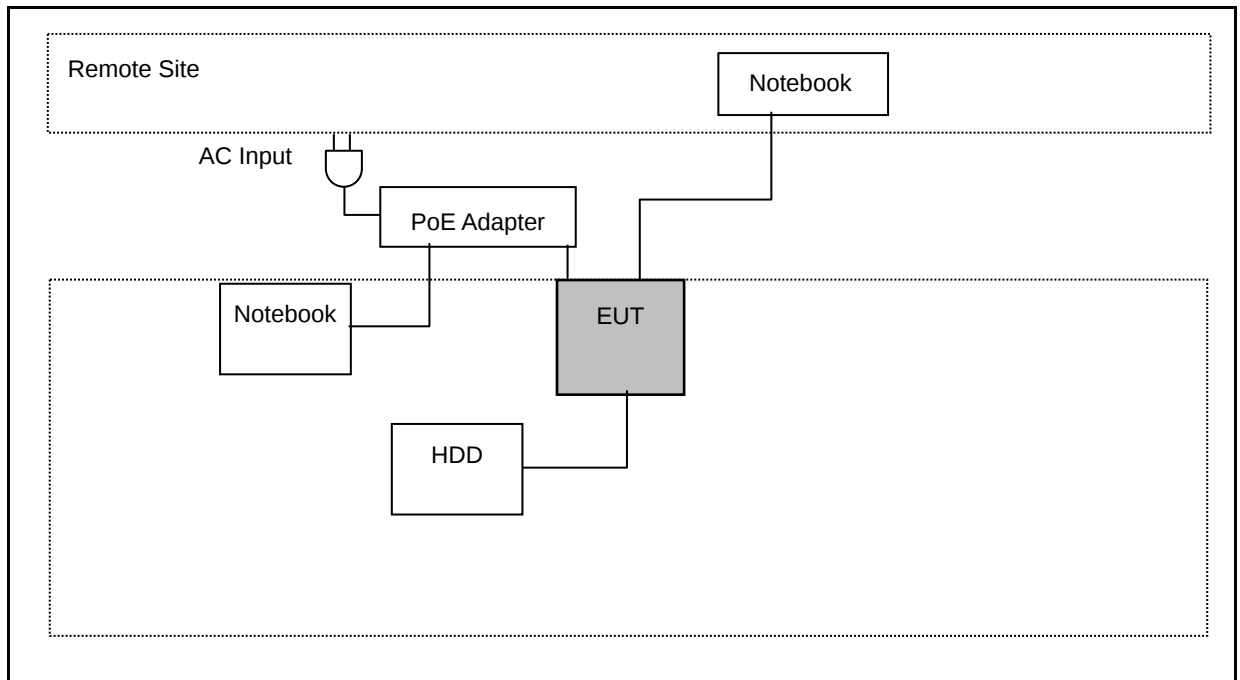
3.2. EUT Exercise Software

The EUT is operated in the engineering mode to fix the TX frequency for the purposes of measurement. According to its specifications, the EUT must comply with the requirements of Section 15.407 under the FCC Rules Part 15 Subpart E.

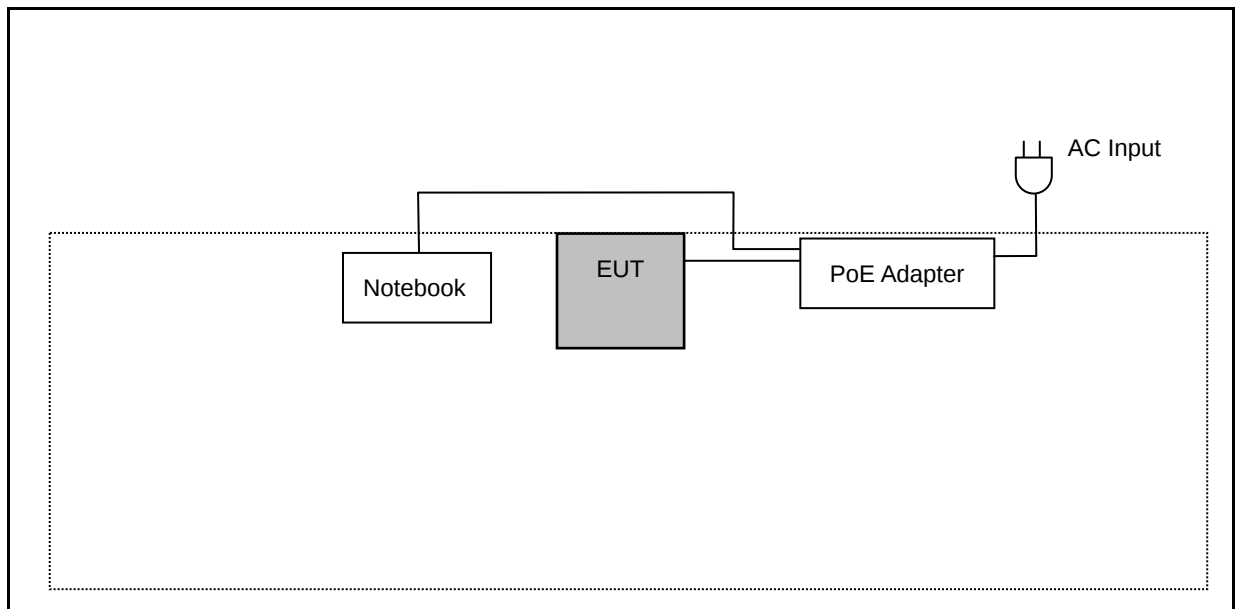
1.	Setup the EUT shown on 3.3.
2.	Turn on the power of all equipment.
3.	Turn on Wi-Fi function link to Notebook.
4.	EUT run test program.

3.3. Configuration of Test System Details

Conducted Emissions



Radiated Emissions



3.4. Test Site Environment

Items	Required (IEC 60068-1)	Actual
Temperature (°C)	15-35	26
Humidity (%RH)	25-75	60
Barometric pressure (mbar)	860-1060	950

4 AC Power Conducted Emission Measurement

4.1. Limit

Frequency (MHz)	Quasi-peak	Average
0.15 - 0.5	66 to 56	56 to 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

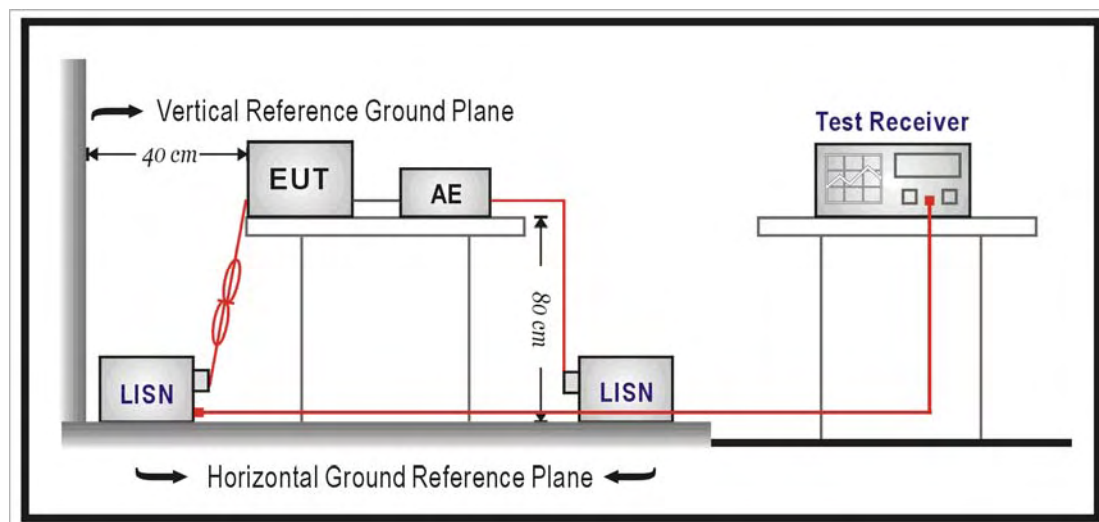
4.2. Test Instruments

Describe	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Test Receiver	R&S	ESCI	100367	06/25/2015	(1)
LISN	R&S	ENV216	101040	03/10/2015	(1)
LISN	R&S	ENV216	101041	03/06/2015	(1)
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

Note: N.C.R. = No Calibration Request.

4.3. Test Setup



4.4. Test Procedure

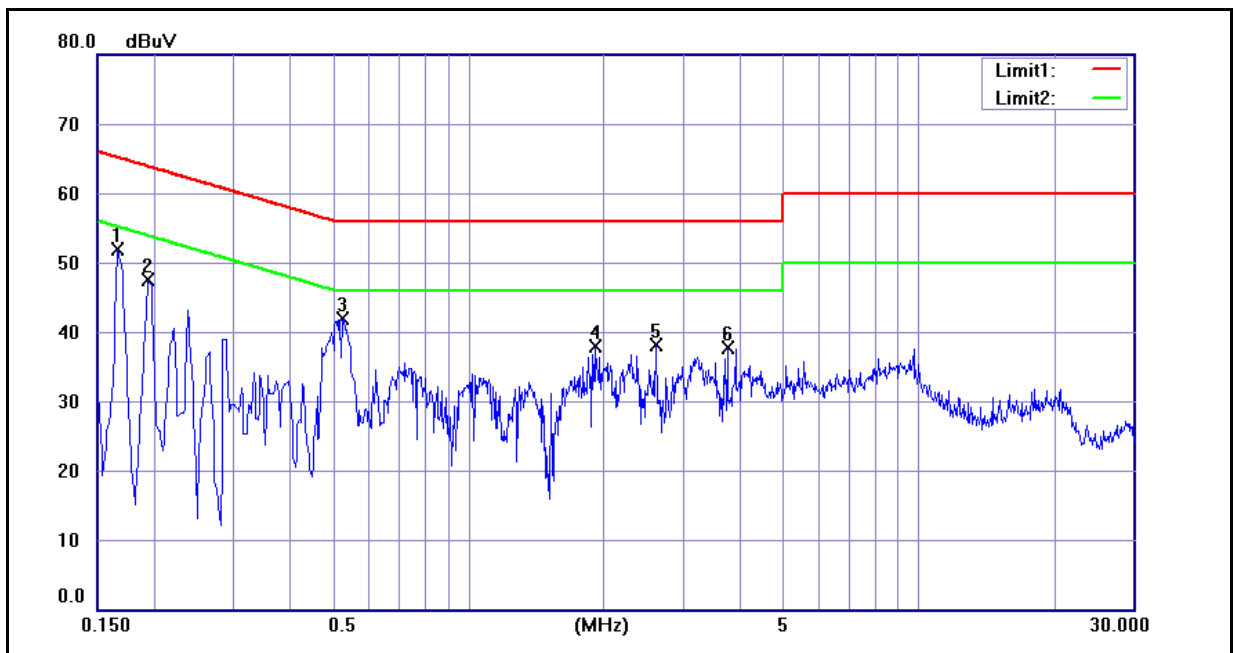
The power line conducted emission measurements were performed in a shielded enclosure. The EUT was assembled on a wooden table which is 80 centimeters high, was placed 40 centimeters from the back wall and at least 1 meter from the sidewall.

Power was fed to the EUT from the public utility power grid through a line filter and EMCO Model 3162/2 SH Line Impedance Stabilization Networks (LISN). The LISN housing, measuring instrumentation case, ground plane, etc., were electrically bonded together at the same RF potential. The Spectrum analyzer was connected to the AC line through an isolation transformer. The 50-ohm output of the LISN was connected to the spectrum analyzer directly. Conducted emission levels were in the CISPR quasi-peak detection mode. The analyzer's 6 dB bandwidth was set to 9 KHz. No post-detector video filter was used.

The spectrum was scanned from 150 KHz to 30 MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in paragraph 4.1.

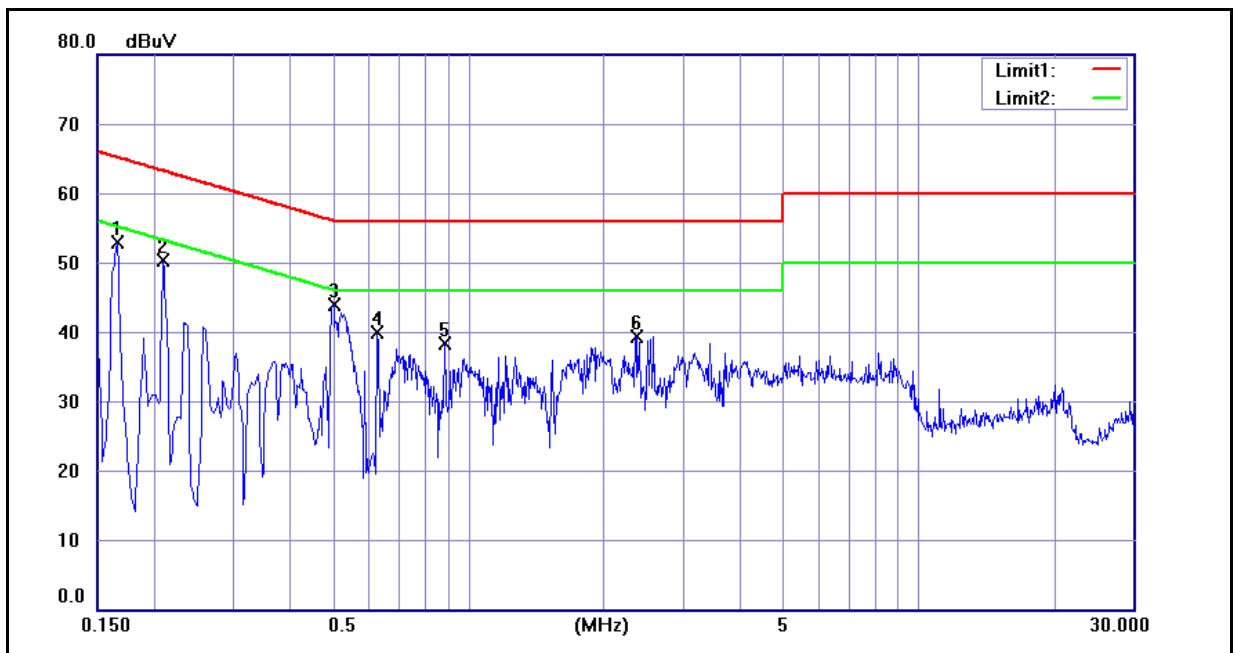
4.5. Test Result

Standard:	FCC Part 15E	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	UAP-AC-PRO	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 1	Date:	08/20/2015
		Test By:	Eric Ou Yang



No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1940	36.31	16.92	9.55	45.86	26.47	79.00	66.00	-33.14	-39.53	Pass
2	0.4860	38.50	30.23	9.55	48.05	39.78	79.00	66.00	-30.95	-26.22	Pass
3	0.8140	31.58	24.90	9.55	41.13	34.45	73.00	60.00	-31.87	-25.55	Pass
4	1.4900	34.93	33.08	9.55	44.48	42.63	73.00	60.00	-28.52	-17.37	Pass
5	6.2020	28.44	24.89	9.59	38.03	34.48	73.00	60.00	-34.97	-25.52	Pass
6	7.9420	32.55	32.06	9.62	42.17	41.68	73.00	60.00	-30.83	-18.32	Pass

Standard:	FCC Part 15E	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	UAP-AC-PRO	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 1	Date:	08/20/2015
		Test By:	Eric Ou Yang



No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1620	40.62	20.01	9.55	50.17	29.56	79.00	66.00	-28.83	-36.44	Pass
2	0.1860	39.40	25.58	9.55	48.95	35.13	79.00	66.00	-30.05	-30.87	Pass
3	0.4940	37.93	28.35	9.55	47.48	37.90	79.00	66.00	-31.52	-28.10	Pass
4	1.4900	34.66	32.82	9.55	44.21	42.37	73.00	60.00	-28.79	-17.63	Pass
5	6.6980	32.12	29.20	9.63	41.75	38.83	73.00	60.00	-31.25	-21.17	Pass
6	7.6900	34.50	34.29	9.64	44.14	43.93	73.00	60.00	-28.86	-16.07	Pass

5 Radiated Emission Measurement

5.1. Limit

Limits of Radiated Emission Measurement

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequency Range (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	10	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 (uV/m).

3. As shown in 15.35(b), 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.

5.2. Test Instruments

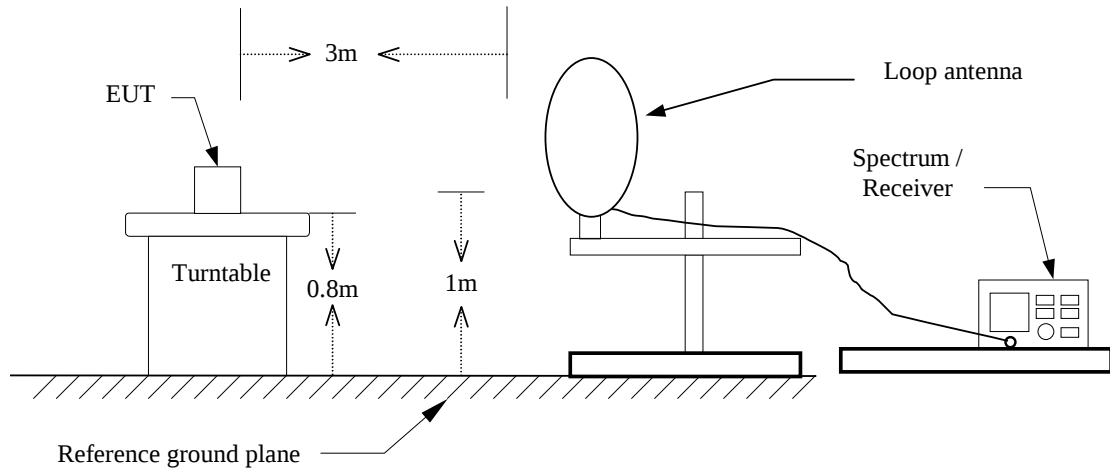
3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
RF Pre-selector	Agilent	N9039A	MY46520256	01/06/2015	(1)
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/06/2015	(1)
Pre Amplifier	Agilent	8449B	3008A02237	02/24/2015	(1)
Pre Amplifier	Agilent	8447D	2944A10961	02/24/2015	(1)
Broadband Antenna (30MHz~1GHz)	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	08/11/2015	(1)
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	06/10/2015	(1)
Horn Antenna (18~40GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	07/06/2015	(1)
Test Site	ATL	TE01	888001	08/28/2014	(1)

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

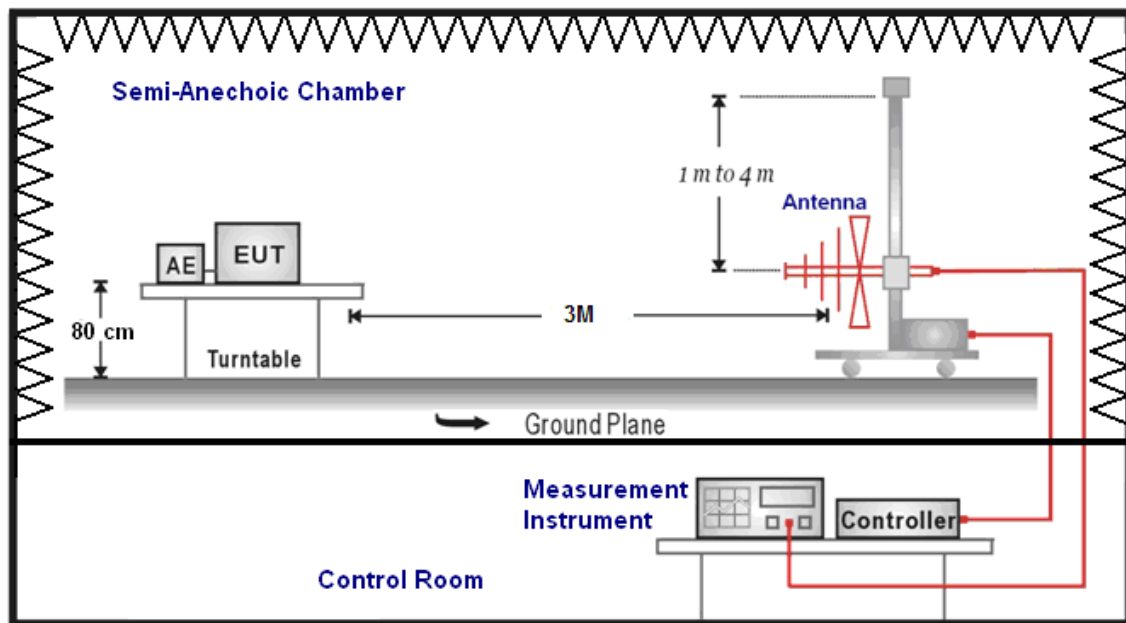
Note: N.C.R. = No Calibration Request.

5.3. Setup

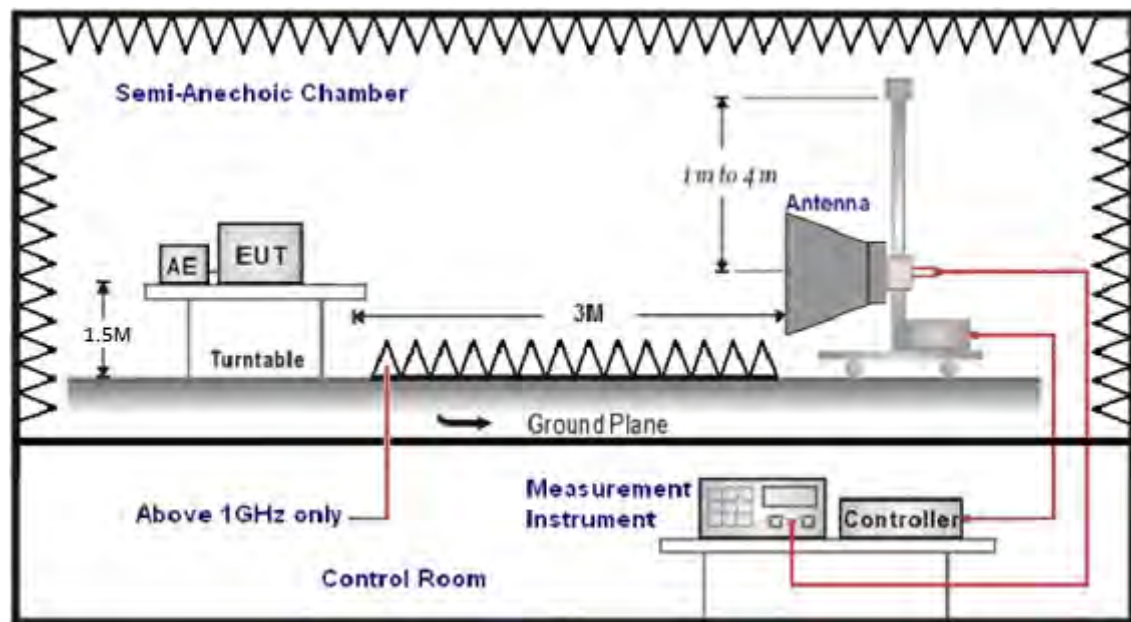
9kHz ~ 30MHz



30MHz ~ 1GHz



Above 1GHz



5.4. Test Procedure

Final radiation measurements were made on a three-meter, Semi Anechoic Chamber. The EUT system was placed on a nonconductive turntable which is 0.8 or 1.5 meters height (below 1GHz use 0.8m turntable / above 1GHz use 1.5m turntable), top surface 1.0 x 1.5 meter. The spectrum was examined from 250 MHz to 2.5 GHz in order to cover the whole spectrum below 10th harmonic which could generate from the EUT. During the test, EUT was set to transmit continuously & Measurements spectrum range from 9 kHz to 40 GHz is investigated.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For restricted measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 3 MHz for peak measurements and 10 Hz for average measurements when Duty cycle > 0.98 / 1/T for average measurements when Duty cycle < 0.98.

For out of band measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 3 MHz for peak measurements.

A nonconductive material surrounded the EUT to supporting the EUT for standing on three orthogonal planes. At each condition, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

SCHWARZBECK MESS-ELEKTRONIK Trilog-Broadband Antenna (mode SB AC VULB) at 3 Meter and the ETS-Lindgren Double-Ridged Waveguide Horn antenna (model 3117) Schwarzbeck Mess-Elektronik Broadband Horn Antenna (BBHA 9170) was used in frequencies 1 – 40 GHz at a distance of 1 meter. All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20dB/decade). For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post – detector video filters were used in the test.

The spectrum analyzer's 6 dB bandwidth was set to 1 MHz, and the analyzer was operated in the peak detection mode, for frequencies both below and up 1 GHz. The average levels were obtained by subtracting the duty cycle correction factor from the peak readings.

The following procedures were used to convert the emission levels measured in decibels referenced to 1 microvolt (dBuV) into field intensity in micro volts per meter (uV/m).

The actual field intensity in decibels referenced to 1 microvolt in to field intensity in micro volts per meter (dBuV/m).

The actual field intensity in referenced to 1 microvolt per meter (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) and Subtracting the gain of preamplifier (dB) is auto calculate in spectrum analyzer.

- (1) Amplitude (dBuV/m) = FI (dBuV) +AF (dBuV) +CL (dBuV)-Gain (dB)

FI= Reading of the field intensity.

AF= Antenna factor.

CL= Cable loss.

P.S Amplitude is auto calculate in spectrum analyzer.

- (2) Actual Amplitude (dBuV/m) = Amplitude (dBuV)-Dis(dB)

The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:

(a) For fundamental frequency : Transmitter Output < +30dBm

(b) For spurious frequency : Spurious emission limits = fundamental emission limit /10

5.5. Test Result

Below 1GHz

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Radiated Emission		Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO		Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Test Mode:		Mode 1		Date:		07/09/2015	
Description:				Test By:		Eric Ou Yang	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
162.5000	29.05	-11.44	17.61	43.50	-25.89	QP	H
256.0000	36.62	-11.13	25.49	46.00	-20.51	QP	H
340.5000	34.43	-8.66	25.77	46.00	-20.23	QP	H
402.0000	32.82	-7.30	25.52	46.00	-20.48	QP	H
596.0000	26.55	-3.26	23.29	46.00	-22.71	QP	H
720.0000	26.67	-0.98	25.69	46.00	-20.31	QP	H
257.5000	40.31	-11.07	29.24	46.00	-16.76	QP	V
406.5000	35.80	-7.21	28.59	46.00	-17.41	QP	V
564.0000	28.73	-4.11	24.62	46.00	-21.38	QP	V
647.0000	26.69	-2.58	24.11	46.00	-21.89	QP	V
808.5000	27.58	0.59	28.17	46.00	-17.83	QP	V
903.5000	25.53	2.72	28.25	46.00	-17.75	QP	V

Note: No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).

Above 1GHz

Standard:	FCC Part 15E		Test Distance:	3m			
Test item:	Radiated Emission		Power:	AC 120V/60Hz			
Model Number:	UAP-AC-PRO		Temp.(℃)/Hum.(%RH):	26(℃)/60%RH			
Test Mode:	Mode 2		Date:	07/09/2015			
Frequency:	5180MHz		Test By:	Eric Ou Yang			
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2827.000	36.88	5.66	42.54	74.00	-31.46	peak	H
4542.000	35.42	9.83	45.25	74.00	-28.75	peak	H
7671.000	34.01	13.30	47.31	74.00	-26.69	peak	H
2813.000	38.43	5.62	44.05	74.00	-29.95	peak	V
4542.000	33.99	9.83	43.82	74.00	-30.18	peak	V
7671.000	32.73	13.30	46.03	74.00	-27.97	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-PRO			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 2			Date:	07/09/2015		
Frequency:	5200MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2834.000	36.08	5.67	41.75	74.00	-32.25	peak	H
4542.000	33.53	9.83	43.36	74.00	-30.64	peak	H
7671.000	33.72	13.30	47.02	74.00	-26.98	peak	H
2834.000	38.07	5.67	43.74	74.00	-30.26	peak	V
4570.000	35.36	9.87	45.23	74.00	-28.77	peak	V
7685.000	33.12	13.30	46.42	74.00	-27.58	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-PRO			Temp.(℃)/Hum.(%RH):	26(℃)/60%RH		
Test Mode:	Mode 2			Date:	07/09/2015		
Frequency:	5240MHZ			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2813.000	36.90	5.62	42.52	74.00	-31.48	peak	H
4577.000	33.74	9.87	43.61	74.00	-30.39	peak	H
7685.000	32.46	13.30	45.76	74.00	-28.24	peak	H
2813.000	37.20	5.62	42.82	74.00	-31.18	peak	V
4542.000	35.09	9.83	44.92	74.00	-29.08	peak	V
7678.000	32.83	13.30	46.13	74.00	-27.87	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-PRO			Temp.(℃)/Hum.(%RH):	26(℃)/60%RH		
Test Mode:	Mode 2			Date:	07/09/2015		
Frequency:	5745MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2827.000	36.56	5.66	42.22	74.00	-31.78	peak	H
4570.000	35.11	9.87	44.98	74.00	-29.02	peak	H
7657.000	34.13	13.28	47.41	74.00	-26.59	peak	H
2813.000	37.01	5.62	42.63	74.00	-31.37	peak	V
4570.000	33.87	9.87	43.74	74.00	-30.26	peak	V
7699.000	33.01	13.33	46.34	74.00	-27.66	peak	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	UAP-AC-PRO	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 2	Date:	07/09/2015				
Frequency:	5785MHz	Test By:	Eric Ou Yang				
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2806.000	37.67	5.61	43.28	74.00	-30.72	peak	H
4570.000	33.53	9.87	43.40	74.00	-30.60	peak	H
7643.000	32.80	13.27	46.07	74.00	-27.93	peak	H
2813.000	37.05	5.62	42.67	74.00	-31.33	peak	V
4563.000	33.60	9.86	43.46	74.00	-30.54	peak	V
7650.000	32.68	13.27	45.95	74.00	-28.05	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-PRO			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 2			Date:	07/09/2015		
Frequency:	5825MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2813.000	38.56	5.62	44.18	74.00	-29.82	peak	H
4605.000	34.03	9.92	43.95	74.00	-30.05	peak	H
7657.000	33.90	13.28	47.18	74.00	-26.82	peak	H
2806.000	37.90	5.61	43.51	74.00	-30.49	peak	V
4591.000	33.98	9.90	43.88	74.00	-30.12	peak	V
7650.000	32.73	13.27	46.00	74.00	-28.00	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-PRO			Temp.(℃)/Hum.(%RH):	26(℃)/60%RH		
Test Mode:	Mode 3			Date:	07/09/2015		
Frequency:	5180MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2813.000	37.40	5.62	43.02	74.00	-30.98	peak	H
4318.000	33.26	9.40	42.66	74.00	-31.34	peak	H
7629.000	32.78	13.25	46.03	74.00	-27.97	peak	H
2806.000	37.21	5.61	42.82	74.00	-31.18	peak	V
4290.000	35.07	9.35	44.42	74.00	-29.58	peak	V
7671.000	33.98	13.30	47.28	74.00	-26.72	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-PRO			Temp.(℃)/Hum.(%RH):	26(℃)/60%RH		
Test Mode:	Mode 3			Date:	07/09/2015		
Frequency:	5200MHZ			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2799.000	38.15	5.59	43.74	74.00	-30.26	peak	H
4535.000	34.60	9.81	44.41	74.00	-29.59	peak	H
7650.000	33.48	13.27	46.75	74.00	-27.25	peak	H
2827.000	37.44	5.66	43.10	74.00	-30.90	peak	V
4297.000	33.35	9.37	42.72	74.00	-31.28	peak	V
7657.000	33.41	13.28	46.69	74.00	-27.31	peak	V

Standard:	FCC Part 15E		Test Distance:	3m			
Test item:	Radiated Emission		Power:	AC 120V/60Hz			
Model Number:	UAP-AC-PRO		Temp.(°C)/Hum.(%RH):	26(°C)/60%RH			
Test Mode:	Mode 3		Date:	07/09/2015			
Frequency:	5240MHz		Test By:	Eric Ou Yang			
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2827.000	36.84	5.66	42.50	74.00	-31.50	peak	H
4311.000	33.77	9.39	43.16	74.00	-30.84	peak	H
7650.000	32.86	13.27	46.13	74.00	-27.87	peak	H
2806.000	37.47	5.61	43.08	74.00	-30.92	peak	V
4297.000	31.86	9.37	41.23	74.00	-32.77	peak	V
7685.000	30.80	13.30	44.10	74.00	-29.90	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-PRO			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 3			Date:	07/09/2015		
Frequency:	5745MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2827.000	37.27	5.66	42.93	74.00	-31.07	peak	H
4591.000	33.85	9.90	43.75	74.00	-30.25	peak	H
7671.000	33.41	13.30	46.71	74.00	-27.29	peak	H
2827.000	37.15	5.66	42.81	74.00	-31.19	peak	V
4570.000	33.88	9.87	43.75	74.00	-30.25	peak	V
7671.000	33.16	13.30	46.46	74.00	-27.54	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-PRO			Temp.(℃)/Hum.(%RH):	26(℃)/60%RH		
Test Mode:	Mode 3			Date:	07/09/2015		
Frequency:	5785MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2806.000	37.73	5.61	43.34	74.00	-30.66	peak	H
4619.000	34.49	9.94	44.43	74.00	-29.57	peak	H
7678.000	34.31	13.30	47.61	74.00	-26.39	peak	H
2806.000	37.41	5.61	43.02	74.00	-30.98	peak	V
4619.000	34.84	9.94	44.78	74.00	-29.22	peak	V
7671.000	33.22	13.30	46.52	74.00	-27.48	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-PRO			Temp.(℃)/Hum.(%RH):	26(℃)/60%RH		
Test Mode:	Mode 3			Date:	07/09/2015		
Frequency:	5825MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2813.000	37.47	5.62	43.09	74.00	-30.91	peak	H
4605.000	34.22	9.92	44.14	74.00	-29.86	peak	H
7678.000	33.16	13.30	46.46	74.00	-27.54	peak	H
2834.000	37.02	5.67	42.69	74.00	-31.31	peak	V
4549.000	33.91	9.83	43.74	74.00	-30.26	peak	V
7643.000	32.33	13.27	45.60	74.00	-28.40	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-PRO			Temp.(℃)/Hum.(%RH):	26(℃)/60%RH		
Test Mode:	Mode 4			Date:	07/09/2015		
Frequency:	5190MHZ			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2806.000	35.25	5.61	40.86	74.00	-33.14	peak	H
4311.000	32.76	9.39	42.15	74.00	-31.85	peak	H
7657.000	32.79	13.28	46.07	74.00	-27.93	peak	H
2813.000	37.23	5.62	42.85	74.00	-31.15	peak	V
4339.000	33.08	9.45	42.53	74.00	-31.47	peak	V
7671.000	34.34	13.30	47.64	74.00	-26.36	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-PRO			Temp.(℃)/Hum.(%RH):	26(℃)/60%RH		
Test Mode:	Mode 4			Date:	07/09/2015		
Frequency:	5230MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2813.000	35.93	5.62	41.55	74.00	-32.45	peak	H
4563.000	34.62	9.86	44.48	74.00	-29.52	peak	H
7650.000	31.82	13.27	45.09	74.00	-28.91	peak	H
2806.000	36.06	5.61	41.67	74.00	-32.33	peak	V
4318.000	34.02	9.40	43.42	74.00	-30.58	peak	V
7629.000	33.97	13.25	47.22	74.00	-26.78	peak	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	UAP-AC-PRO	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 4	Date:	07/09/2015				
Frequency:	5755MHz	Test By:	Eric Ou Yang				
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2806.000	36.42	5.61	42.03	74.00	-31.97	peak	H
4549.000	33.26	9.83	43.09	74.00	-30.91	peak	H
7671.000	32.26	13.30	45.56	74.00	-28.44	peak	H
2806.000	37.94	5.61	43.55	74.00	-30.45	peak	V
4549.000	34.71	9.83	44.54	74.00	-29.46	peak	V
7657.000	33.79	13.28	47.07	74.00	-26.93	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-PRO			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 4			Date:	07/09/2015		
Frequency:	5795MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2834.000	37.19	5.67	42.86	74.00	-31.14	peak	H
4570.000	33.58	9.87	43.45	74.00	-30.55	peak	H
7678.000	32.67	13.30	45.97	74.00	-28.03	peak	H
2834.000	36.05	5.67	41.72	74.00	-32.28	peak	V
4591.000	33.74	9.90	43.64	74.00	-30.36	peak	V
7657.000	33.09	13.28	46.37	74.00	-27.63	peak	V

Standard:	FCC Part 15E		Test Distance:	3m			
Test item:	Radiated Emission		Power:	AC 120V/60Hz			
Model Number:	UAP-AC-PRO		Temp.(°C)/Hum.(%RH):	26(°C)/60%RH			
Test Mode:	Mode 5		Date:	07/09/2015			
Frequency:	5210MHz		Test By:	Eric Ou Yang			
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2813.000	35.35	5.62	40.97	74.00	-33.03	peak	H
4619.000	33.04	9.94	42.98	74.00	-31.02	peak	H
7622.000	31.24	13.25	44.49	74.00	-29.51	peak	H
2799.000	35.68	5.59	41.27	74.00	-32.73	peak	V
4605.000	33.27	9.92	43.19	74.00	-30.81	peak	V
7657.000	31.37	13.28	44.65	74.00	-29.35	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-PRO			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 5			Date:	07/09/2015		
Frequency:	5775MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2813.000	36.68	5.62	42.30	74.00	-31.70	peak	H
4591.000	33.55	9.90	43.45	74.00	-30.55	peak	H
7657.000	32.81	13.28	46.09	74.00	-27.91	peak	H
2834.000	38.12	5.67	43.79	74.00	-30.21	peak	V
4577.000	36.02	9.87	45.89	74.00	-28.11	peak	V
7650.000	33.68	13.27	46.95	74.00	-27.05	peak	V

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Radiated Emission		Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO		Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Mode:		2.4GHz+5GHz		Date:		08/26/2015	
		Simultaneous Transmitting		Test By:		Eric Ou Yang	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2834.000	34.56	1.14	35.70	74.00	-38.30	peak	H
4570.000	31.22	6.68	37.90	74.00	-36.10	peak	H
7643.000	30.31	14.25	44.56	74.00	-29.44	peak	H
2813.000	36.87	1.07	37.94	74.00	-36.06	peak	V
4549.000	30.41	6.61	37.02	74.00	-36.98	peak	V
7650.000	31.43	14.26	45.69	74.00	-28.31	peak	V

Band Edge

Standard:		FCC Part 15E			Test Distance:		3m	
Test item:		Radiated Emission			Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO			Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Test Mode:		Mode 2			Date:		07/08/2015	
Frequency:		5180 MHz			Test By:		Eric Ou Yang	
Frequency	Reading	Correct Factor	Result	Limit	Margin	Remark	Ant.Polar.	
(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		H / V	
5148.200	48.56	10.74	59.30	74.00	-14.70	peak	H	
5148.200	38.36	10.74	49.10	54.00	-4.90	AVG	H	
5150.000	48.49	10.74	59.23	74.00	-14.77	peak	H	
5150.000	38.61	10.74	49.35	54.00	-4.65	AVG	H	
5145.400	54.40	10.74	65.14	74.00	-8.86	peak	V	
5145.400	39.50	10.74	50.24	54.00	-3.76	AVG	V	
5150.000	52.11	10.74	62.85	74.00	-11.15	peak	V	
5150.000	41.43	10.74	52.17	54.00	-1.83	AVG	V	

Standard:		FCC Part 15E			Test Distance:		3m	
Test item:		Radiated Emission			Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO			Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Test Mode:		Mode 2			Date:		09/02/2015	
Frequency:		5745 MHz			Test By:		Eric Ou Yang	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V	
5714.300	56.32	9.18	65.50	68.20	-2.70	peak	H	
5715.000	55.46	9.18	64.64	68.20	-3.56	peak	H	
5724.500	67.07	9.21	76.28	78.20	-1.92	peak	H	
5725.000	63.40	9.21	72.61	78.20	-5.59	peak	H	
5710.400	57.58	9.17	66.75	68.20	-1.45	peak	V	
5715.000	55.14	9.18	64.32	68.20	-3.88	peak	V	
5724.650	67.75	9.21	76.96	78.20	-1.24	peak	V	
5725.000	65.69	9.21	74.90	78.20	-3.30	peak	V	

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Radiated Emission		Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO		Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Test Mode:		Mode 2		Date:		09/02/2015	
Frequency:		5785 MHz		Test By:		Eric Ou Yang	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
5715.000	44.67	9.18	53.85	68.20	-14.35	peak	H
5725.000	44.32	9.21	53.53	78.20	-24.67	peak	H
5850.000	44.49	9.51	54.00	78.20	-24.20	peak	H
5860.000	44.12	9.53	53.65	68.20	-14.55	peak	H
5715.000	42.82	9.18	52.00	68.20	-16.20	peak	V
5725.000	42.85	9.21	52.06	78.20	-26.14	peak	V
5850.000	42.42	9.51	51.93	78.20	-26.27	peak	V
5860.000	43.62	9.53	53.15	68.20	-15.05	peak	V

Standard:		FCC Part 15E			Test Distance:		3m	
Test item:		Radiated Emission			Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO			Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Test Mode:		Mode 2			Date:		09/02/2015	
Frequency:		5825 MHz			Test By:		Eric Ou Yang	
Frequency	Reading	Correct Factor	Result	Limit	Margin	Remark	Ant.Polar.	
(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		H / V	
5850.000	52.37	9.51	61.88	78.20	-16.32	peak	H	
5860.000	46.87	9.53	56.40	68.20	-11.80	peak	H	
5850.000	62.89	9.51	72.40	78.20	-5.80	peak	V	
5853.300	67.46	9.52	76.98	78.20	-1.22	peak	V	
5860.000	53.27	9.53	62.80	68.20	-5.40	peak	V	
5860.680	52.94	9.53	62.47	68.20	-5.73	peak	V	

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Radiated Emission		Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO		Temp.(℃)/Hum.(%RH):		26(℃)/60%RH	
Test Mode:		Mode 3		Date:		07/09/2015	
Frequency:		5180 MHz		Test By:		Eric Ou Yang	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
5148.200	49.40	10.74	60.14	74.00	-13.86	peak	H
5148.200	37.59	10.74	48.33	54.00	-5.67	AVG	H
5150.000	47.96	10.74	58.70	74.00	-15.30	peak	H
5150.000	38.40	10.74	49.14	54.00	-4.86	AVG	H
5147.500	52.59	10.74	63.33	74.00	-10.67	peak	V
5147.500	40.94	10.74	51.68	54.00	-2.32	AVG	V
5150.000	53.01	10.74	63.75	74.00	-10.25	peak	V
5150.000	41.45	10.74	52.19	54.00	-1.81	AVG	V

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Radiated Emission		Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO		Temp.(℃)/Hum.(%RH):		26(℃)/60%RH	
Test Mode:		Mode 3		Date:		09/02/2015	
Frequency:		5745 MHz		Test By:		Eric Ou Yang	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
5711.900	55.83	9.18	65.01	68.20	-3.19	peak	H
5715.000	54.71	9.18	63.89	68.20	-4.31	peak	H
5722.850	64.42	9.21	73.63	78.20	-4.57	peak	H
5725.000	65.24	9.21	74.45	78.20	-3.75	peak	H
5714.300	56.85	9.18	66.03	68.20	-2.17	peak	V
5715.000	56.33	9.18	65.51	68.20	-2.69	peak	V
5723.750	66.11	9.21	75.32	78.20	-2.88	peak	V
5725.000	65.79	9.21	75.00	78.20	-3.20	peak	V

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Radiated Emission		Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO		Temp.(℃)/Hum.(%RH):		26(℃)/60%RH	
Test Mode:		Mode 3		Date:		09/02/2015	
Frequency:		5785 MHz		Test By:		Eric Ou Yang	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
5715.000	43.39	9.18	52.57	68.20	-15.63	peak	H
5725.000	43.05	9.21	52.26	78.20	-25.94	peak	H
5850.000	41.57	9.51	51.08	78.20	-27.12	peak	H
5860.000	42.77	9.53	52.30	68.20	-15.90	peak	H
5715.000	43.56	9.18	52.74	68.20	-15.46	peak	V
5725.000	43.56	9.21	52.77	78.20	-25.43	peak	V
5850.000	43.60	9.51	53.11	78.20	-25.09	peak	V
5860.000	41.99	9.53	51.52	68.20	-16.68	peak	V

Standard:		FCC Part 15E			Test Distance:		3m	
Test item:		Radiated Emission			Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO			Temp.(℃)/Hum.(%RH):		26(℃)/60%RH	
Test Mode:		Mode 3			Date:		09/02/2015	
Frequency:		5825 MHz			Test By:		Eric Ou Yang	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V	
5850.000	62.09	9.51	71.60	78.20	-6.60	peak	H	
5855.100	63.86	9.53	73.39	78.20	-4.81	peak	H	
5860.000	51.88	9.53	61.41	68.20	-6.79	peak	H	
5860.860	50.45	9.54	59.99	68.20	-8.21	peak	H	
5850.000	62.95	9.51	72.46	78.20	-5.74	peak	V	
5850.960	66.86	9.51	76.37	78.20	-1.83	peak	V	
5860.000	55.26	9.53	64.79	68.20	-3.41	peak	V	
5860.860	55.39	9.54	64.93	68.20	-3.27	peak	V	

Standard:		FCC Part 15E			Test Distance:		3m	
Test item:		Radiated Emission			Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO			Temp.(℃)/Hum.(%RH):		26(℃)/60%RH	
Test Mode:		Mode 4			Date:		07/08/2015	
Frequency:		5190 MHz			Test By:		Eric Ou Yang	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V	
5145.400	47.78	10.74	58.52	74.00	-15.48	peak	H	
5145.400	37.19	10.74	47.93	54.00	-6.07	AVG	H	
5150.000	47.77	10.74	58.51	74.00	-15.49	peak	H	
5150.000	37.77	10.74	48.51	54.00	-5.49	AVG	H	
5148.200	55.78	10.74	66.52	74.00	-7.48	peak	V	
5148.200	41.05	10.74	51.79	54.00	-2.21	AVG	V	
5150.000	52.87	10.74	63.61	74.00	-10.39	peak	V	
5150.000	41.50	10.74	52.24	54.00	-1.76	AVG	V	

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Radiated Emission		Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO		Temp.(℃)/Hum.(%RH):		26(℃)/60%RH	
Test Mode:		Mode 4		Date:		09/02/2015	
Frequency:		5755 MHz		Test By:		Eric Ou Yang	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
5713.280	57.09	9.18	66.27	68.20	-1.93	peak	H
5715.000	55.16	9.18	64.34	68.20	-3.86	peak	H
5723.520	64.82	9.21	74.03	78.20	-4.17	peak	H
5725.000	59.38	9.21	68.59	78.20	-9.61	peak	H
5712.800	57.87	9.18	67.05	68.20	-1.15	peak	V
5715.000	57.61	9.18	66.79	68.20	-1.41	peak	V
5722.880	65.90	9.21	75.11	78.20	-3.09	peak	V
5725.000	65.10	9.21	74.31	78.20	-3.89	peak	V

Standard:		FCC Part 15E			Test Distance:		3m	
Test item:		Radiated Emission			Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO			Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Test Mode:		Mode 4			Date:		09/02/2015	
Frequency:		5795 MHz			Test By:		Eric Ou Yang	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V	
5850.000	54.25	9.51	63.76	78.20	-14.44	peak	H	
5852.580	54.79	9.52	64.31	78.20	-13.89	peak	H	
5860.000	47.82	9.53	57.35	68.20	-10.85	peak	H	
5863.290	51.25	9.55	60.80	68.20	-7.40	peak	H	
5850.000	62.31	9.51	71.82	78.20	-6.38	peak	V	
5851.110	62.40	9.51	71.91	78.20	-6.29	peak	V	
5860.000	51.48	9.53	61.01	68.20	-7.19	peak	V	
5863.920	53.85	9.55	63.40	68.20	-4.80	peak	V	

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Radiated Emission		Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO		Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Test Mode:		Mode 5		Date:		07/08/2015	
Frequency:		5210 MHz		Test By:		Eric Ou Yang	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
5143.970	50.52	10.74	61.26	74.00	-12.74	peak	H
5143.970	37.47	10.74	48.21	54.00	-5.79	AVG	H
5150.000	46.46	10.74	57.20	74.00	-16.80	peak	H
5150.000	38.16	10.74	48.90	54.00	-5.10	AVG	H
5146.810	55.17	10.74	65.91	74.00	-8.09	peak	V
5146.810	41.81	10.74	52.55	54.00	-1.45	AVG	V
5150.000	51.72	10.74	62.46	74.00	-11.54	peak	V
5150.000	42.06	10.74	52.80	54.00	-1.20	AVG	V

Standard:		FCC Part 15E			Test Distance:		3m	
Test item:		Radiated Emission			Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO			Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Test Mode:		Mode 5			Date:		09/02/2015	
Frequency:		5775 MHz			Test By:		Eric Ou Yang	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V	
5715.000	52.78	9.18	61.96	68.20	-6.24	peak	H	
5725.000	60.87	9.21	70.08	78.20	-8.12	peak	H	
5850.000	51.18	9.51	60.69	78.20	-17.51	peak	H	
5860.000	49.74	9.53	59.27	68.20	-8.93	peak	H	
5715.000	54.51	9.18	63.69	68.20	-4.51	peak	V	
5725.000	62.72	9.21	71.93	78.20	-6.27	peak	V	
5850.000	54.66	9.51	64.17	78.20	-14.03	peak	V	
5860.000	52.77	9.53	62.30	68.20	-5.90	peak	V	

6 Maximum Conducted Output Power Measurement

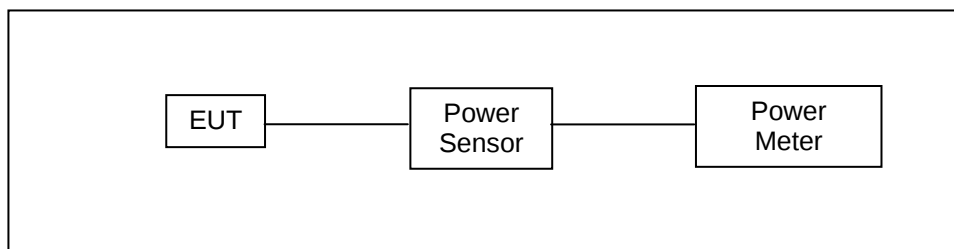
6.1. Limit

Conducted Output Power

Frequency Range (MHz)	FCC Limit
5.150 ~ 5.250 GHz	The lesser of 1000mW (30dBm)
5.250 ~ 5.350 GHz	The lesser of 250mW (24dBm) or 11dBm + 10log (B)
5.470 ~ 5.725 GHz	The lesser of 250mW (24dBm) or 11dBm + 10log (B)
5.725 ~ 5.850 GHz	The lesser of 1000mW (30dBm)

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

6.2. Test Setup



6.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Power Sensor	Anritsu	MA2411B	1126022	08/21/2014	(1)
Power Meter	Anritsu	ML2495A	1135009	08/21/2014	(1)
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

Note: N.C.R. = No Calibration Request.

6.4. Test Procedure

The test is performed in accordance with KDB789033: D02 General UNII Test Procedures New Rules v01, Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E.

6.5. Test Result

Model Number		UAP-AC-PRO				
Test Item		Maximum Conducted Output Power				
Test Mode		Mode 2: IEEE 802.11a Link Mode				
Date of Test		07/08/2015		Test Site	TE02	
Frequency (MHz)	Data Rate	ANT-0		ANT-1		FCC Limit (dBm)
		Average Power		Average Power		
		(dBm)	(W)	(dBm)	(W)	
5180	6M	16.91	0.049	16.76	0.047	< 30
5200		17.22	0.053	16.83	0.048	
5220		17.25	0.053	16.92	0.049	
5240		17.01	0.050	16.95	0.050	
5745		17.76	0.060	17.72	0.059	< 30
5765		17.77	0.060	17.73	0.059	
5785		17.49	0.056	17.30	0.054	
5805		17.44	0.055	17.23	0.053	
5825		17.59	0.057	17.19	0.052	
5180	54M	16.80	0.048	16.44	0.044	< 30
5200		16.72	0.047	16.43	0.044	
5220		16.95	0.050	16.54	0.045	
5240		16.63	0.046	16.42	0.044	
5745		17.23	0.053	17.03	0.050	< 30
5765		17.30	0.054	17.15	0.052	
5785		17.08	0.051	16.91	0.049	
5805		17.25	0.053	16.70	0.047	
5825		17.15	0.052	16.75	0.047	

Model Number		UAP-AC-PRO				
Test Item		Maximum Conducted Output Power				
Test Mode		Mode 2: IEEE 802.11a Link Mode				
Date of Test		07/08/2015		Test Site		TE02
Frequency (MHz)	Data Rate	ANT-2		ANT-0+1+2		FCC Limit (dBm)
		Average Power		Average Power		
		(dBm)	(W)	(dBm)	(W)	
5180	6M	16.62	0.046	21.54	0.142	< 30
5200		16.66	0.046	21.68	0.147	
5220		16.70	0.047	21.73	0.149	
5240		16.39	0.044	21.56	0.143	
5745		17.69	0.059	22.49	0.178	< 30
5765		17.27	0.053	22.37	0.172	
5785		17.05	0.051	22.05	0.161	
5805		17.22	0.053	22.07	0.161	
5825	17.02	0.050	22.04	0.160		
5180	54M	16.38	0.043	21.32	0.135	< 30
5200		16.38	0.043	21.28	0.134	
5220		16.22	0.042	21.35	0.137	
5240		15.95	0.039	21.11	0.129	
5745		16.82	0.048	21.80	0.151	< 30
5765		16.73	0.047	21.84	0.153	
5785		16.67	0.046	21.66	0.147	
5805		16.61	0.046	21.63	0.146	
5825	16.52	0.045	21.59	0.144		

Model Number		UAP-AC-PRO				
Test Item		Maximum Conducted Output Power				
Test Mode		Mode 3: IEEE 802.11n 20MHz Link Mode				
Date of Test		07/08/2015		Test Site		TE02
Frequency (MHz)	Data Rate	ANT-0		ANT-1		FCC Limit (dBm)
		Average Power		Average Power		
		(dBm)	(W)	(dBm)	(W)	
5180	19.5M	16.98	0.050	16.82	0.048	< 30
5200		17.09	0.051	16.93	0.049	
5220		17.17	0.052	16.88	0.049	
5240		17.08	0.051	17.00	0.050	
5745		17.99	0.063	17.96	0.063	< 30
5765		17.73	0.059	17.66	0.058	
5785		17.55	0.057	17.49	0.056	
5805		17.59	0.057	17.27	0.053	
5825	17.61	0.058	17.23	0.053		
5180	195M	16.52	0.045	16.44	0.044	< 30
5200		16.61	0.046	16.52	0.045	
5220		16.88	0.049	16.48	0.044	
5240		16.48	0.044	16.34	0.043	
5745		17.32	0.054	17.24	0.053	< 30
5765		17.35	0.054	17.19	0.052	
5785		17.25	0.053	17.04	0.051	
5805		17.13	0.052	16.83	0.048	
5825	17.22	0.053	17.01	0.050		

Model Number		UAP-AC-PRO				
Test Item		Maximum Conducted Output Power				
Test Mode		Mode 3: IEEE 802.11n 20MHz Link Mode				
Date of Test		07/08/2015		Test Site		TE02
Frequency (MHz)	Data Rate	ANT-2		ANT-0+1+2		FCC Limit (dBm)
		Average Power		Average Power		
		(dBm)	(W)	(dBm)	(W)	
5180	19.5M	16.52	0.045	21.55	0.143	< 30
5200		16.67	0.046	21.67	0.147	
5220		16.66	0.046	21.68	0.147	
5240		16.38	0.043	21.60	0.145	
5745		17.73	0.059	22.67	0.185	< 30
5765		17.45	0.056	22.39	0.173	
5785		17.40	0.055	22.25	0.168	
5805		17.16	0.052	22.12	0.163	
5825	17.15	0.052	22.11	0.162		
5180	195M	16.02	0.040	21.10	0.129	< 30
5200		16.27	0.042	21.24	0.133	
5220		16.16	0.041	21.29	0.135	
5240		15.93	0.039	21.03	0.127	
5745		17.02	0.050	21.97	0.157	< 30
5765		16.99	0.050	21.95	0.157	
5785		16.88	0.049	21.83	0.152	
5805		16.71	0.047	21.66	0.147	
5825	16.68	0.047	21.75	0.150		

Model Number		UAP-AC-PRO						
Test Item		Maximum Conducted Output Power						
Test Mode		Mode 4: IEEE 802.11n 40MHz Link Mode						
Date of Test		07/08/2015			Test Site		TE02	
Frequency (MHz)	Data Rate	ANT-0		ANT-1			FCC Limit (dBm)	
		Average Power		Average Power				
		(dBm)	(W)	(dBm)	(W)			
5190	40.5M	13.63	0.023	13.21	0.021		< 30	
5230		13.53	0.023	13.27	0.021			
5755		17.16	0.052	17.03	0.050		< 30	
5795		16.96	0.050	16.86	0.049			
5190	405M	13.22	0.021	12.68	0.019		< 30	
5230		13.15	0.021	12.84	0.019		< 30	
5755		16.66	0.046	16.58	0.045			
5795		16.50	0.045	16.33	0.043			

Model Number		UAP-AC-PRO				
Test Item		Maximum Conducted Output Power				
Test Mode		Mode 4: IEEE 802.11n 40MHz Link Mode				
Date of Test		07/08/2015		Test Site		TE02
Frequency (MHz)	Data Rate	ANT-2		ANT-0+1+2		FCC Limit (dBm)
		Average Power		Average Power		
		(dBm)	(W)	(dBm)	(W)	
5190	40.5M	12.96	0.020	18.05	0.064	< 30
5230		12.70	0.019	17.95	0.062	
5755		16.93	0.049	21.81	0.152	< 30
5795		16.55	0.045	21.56	0.143	
5190	405M	12.52	0.018	17.59	0.057	< 30
5230		12.34	0.017	17.56	0.057	< 30
5755		16.48	0.044	21.35	0.136	
5795		16.21	0.042	21.12	0.129	

Model Number		UAP-AC-PRO				
Test Item		Maximum Conducted Output Power				
Test Mode		Mode 5: IEEE 802.11ac 80MHz Link Mode				
Date of Test		07/08/2015		Test Site	TE02	
Frequency (MHz)	Data Rate	ANT-0		ANT-1		FCC Limit (dBm)
		Average Power		Average Power		
		(dBm)	(W)	(dBm)	(W)	
5210	87.9M	11.21	0.013	10.89	0.012	< 30
5775		14.49	0.028	14.37	0.027	< 30
5210	1170M	11.08	0.013	10.81	0.012	< 30
5775		14.36	0.027	14.12	0.026	< 30

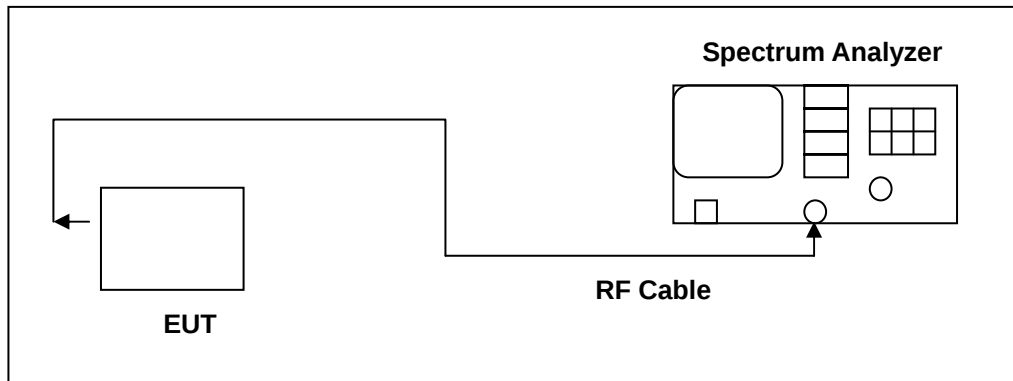
Model Number		UAP-AC-PRO				
Test Item		Maximum Conducted Output Power				
Test Mode		Mode 5: IEEE 802.11ac 80MHz Link Mode				
Date of Test		07/08/2015		Test Site	TE02	
Frequency (MHz)	Data Rate	ANT-2		ANT-0+1+2		FCC Limit (dBm)
		Average Power		Average Power		
		(dBm)	(W)	(dBm)	(W)	
5210	87.9M	10.32	0.011	15.59	0.036	< 30
5775		13.60	0.023	18.94	0.078	< 30
5210	1170M	10.17	0.010	15.47	0.035	< 30
5775		13.54	0.023	18.79	0.076	< 30

7 26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement

7.1. Limit

N/A

7.2. Test Setup



7.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/16/2014	(1)
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

Note: N.C.R. = No Calibration Request.

7.4. Test Procedure

The test is performed in accordance with KDB789033: D02 General UNII Test Procedures New Rules v01, Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E.

7.5. Test Result

Model Number	UAP-AC-PRO			
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement			
Test Mode	Mode 2: IEEE 802.11a Link Mode			
Date of Test	08/20/2015	Test Site	TE02	
Frequency (MHz)	ANT-0		ANT-1	
	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
5180	22.738	16.8042	22.050	16.7321
5200	22.268	16.7635	22.239	16.7251
5240	22.866	16.8195	23.009	16.7555
Frequency (MHz)	ANT-2			
	26dB Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
5180	22.266		16.6738	
5200	22.536		16.7108	
5240	22.778		16.6997	

Model Number	UAP-AC-PRO			
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement			
Test Mode	Mode 3: IEEE 802.11n 20MHz Link Mode			
Date of Test	06/09/2015	Test Site	TE02	
Frequency (MHz)	ANT-0		ANT-1	
	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
5180	23.153	17.8814	23.562	17.8142
5200	23.145	17.8898	22.604	17.8469
5240	22.984	17.8859	23.174	17.8512
Frequency (MHz)	ANT-2			
	26dB Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
5180	22.792		17.7888	
5200	22.568		17.8004	
5240	22.810		17.8147	

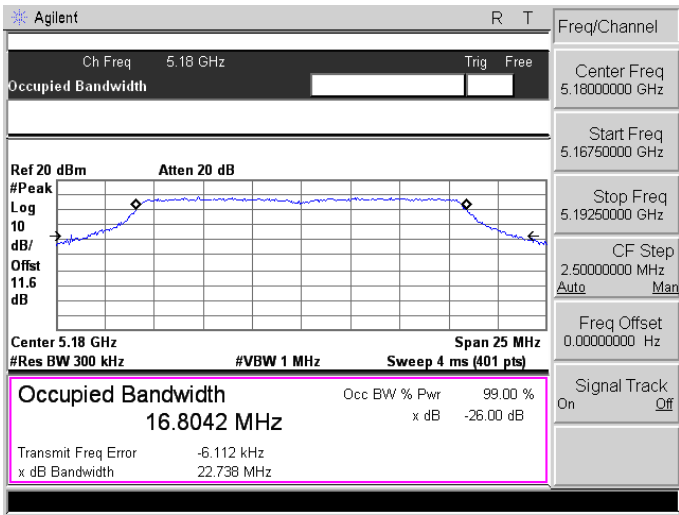
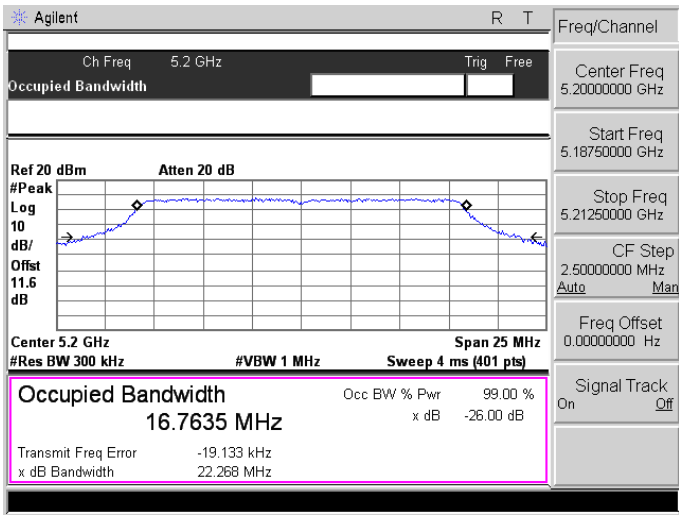
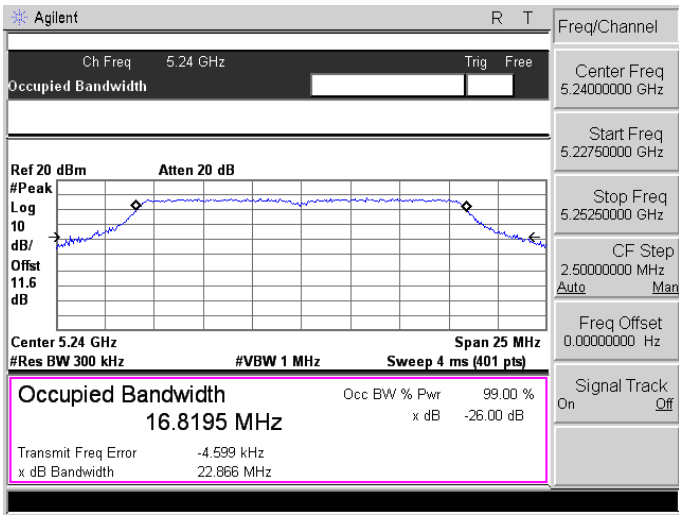
Note: The 99% occupied bandwidth not crossed 5250MHz.

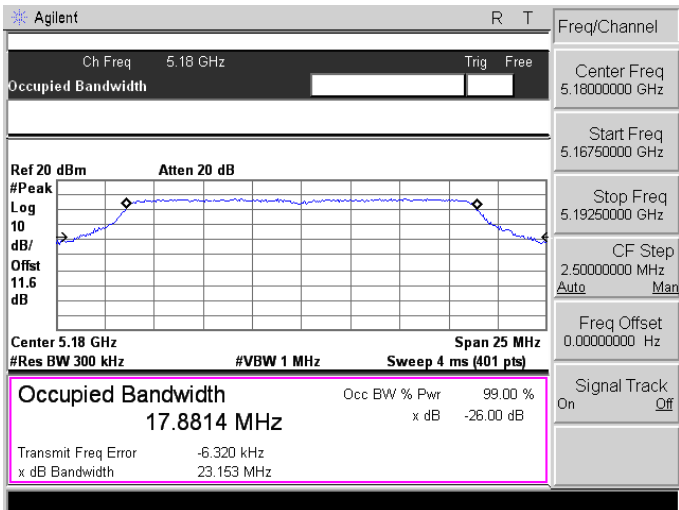
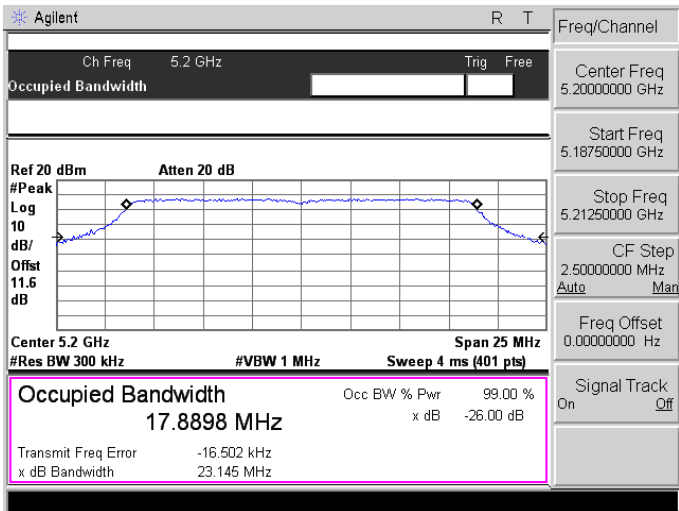
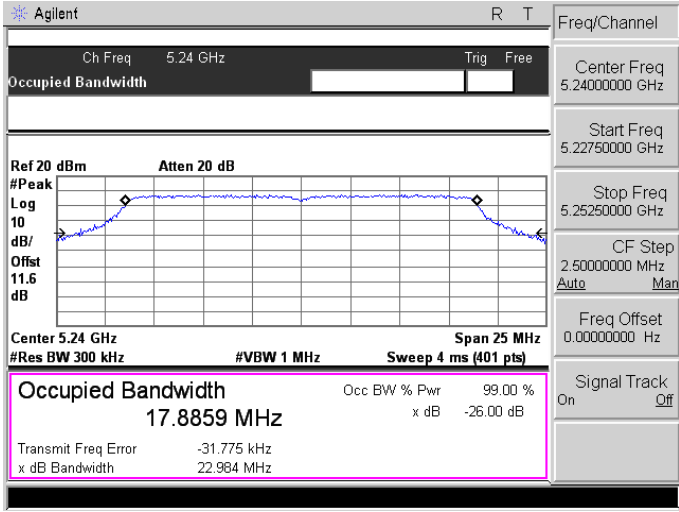
Model Number	UAP-AC-PRO			
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement			
Test Mode	Mode 4: IEEE 802.11n 40MHz Link Mode			
Date of Test	06/09/2015	Test Site	TE02	
Frequency (MHz)	ANT-0		ANT-1	
	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
5190	45.343	37.0208	45.035	36.7809
5230	45.429	36.8220	46.047	36.7335
Frequency (MHz)	ANT-2			
	26dB Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
5190	45.133		36.7539	
5230	44.404		36.5364	

Model Number	UAP-AC-PRO			
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement			
Test Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode			
Date of Test	05/06/2015	Test Site	TE02	
Frequency (MHz)	ANT-0		ANT-1	
	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
5210	87.895	75.7672	87.826	75.5083
Frequency (MHz)	ANT-2			
	26dB Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
5210	87.017		75.6865	

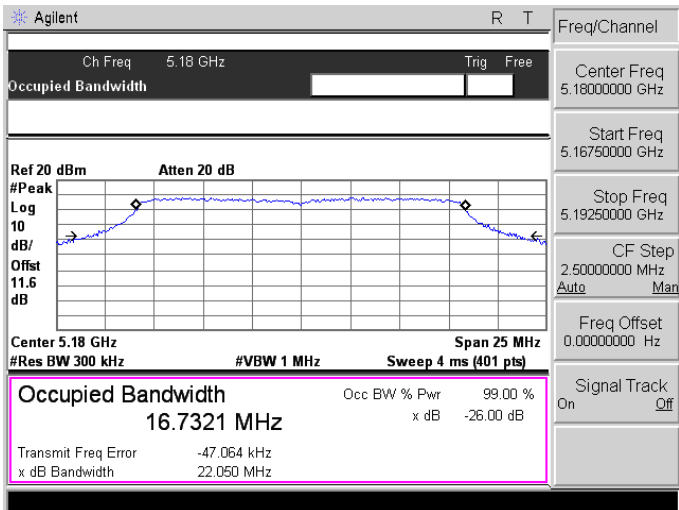
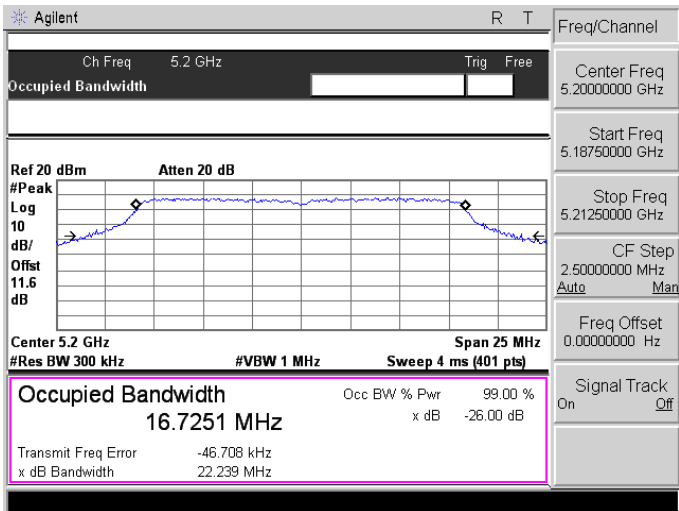
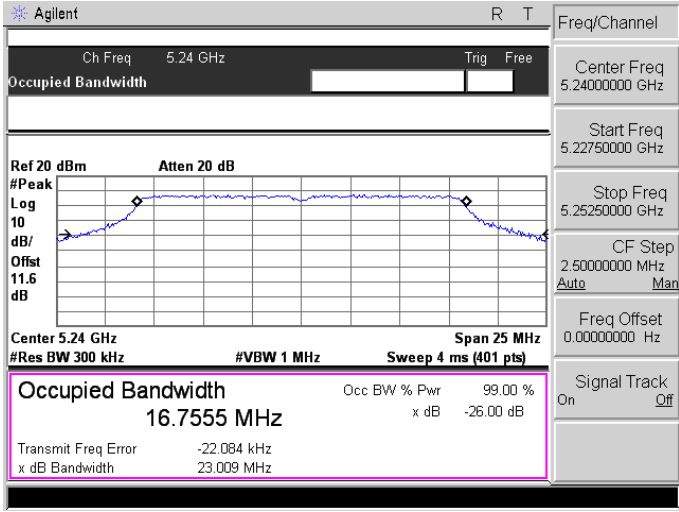
Note: The 99% occupied bandwidth not crossed 5250MHz.

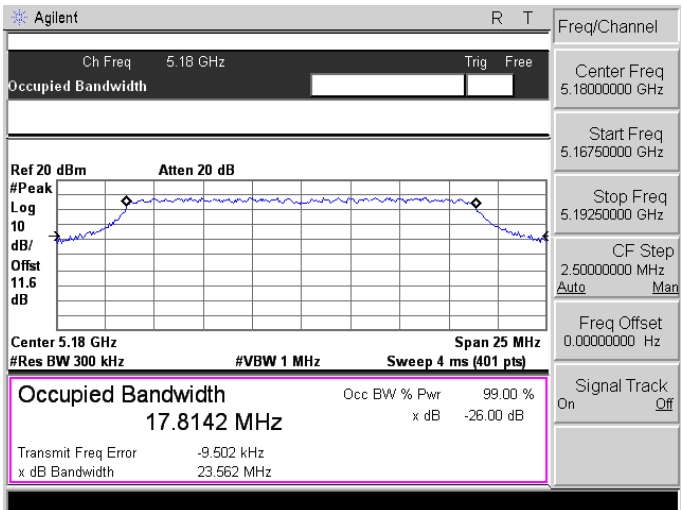
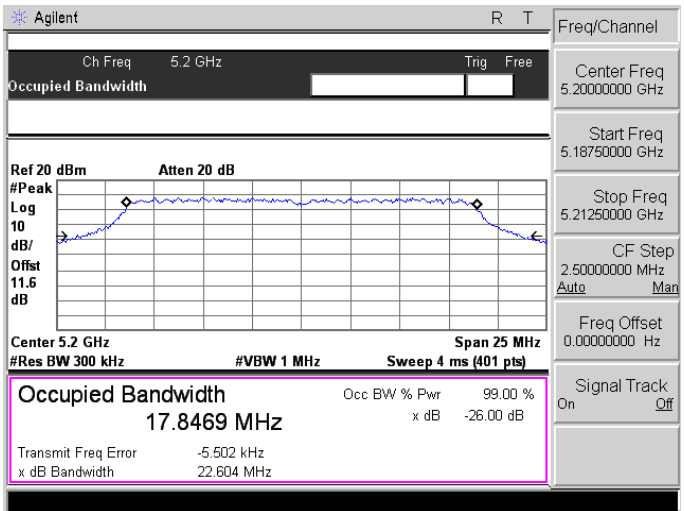
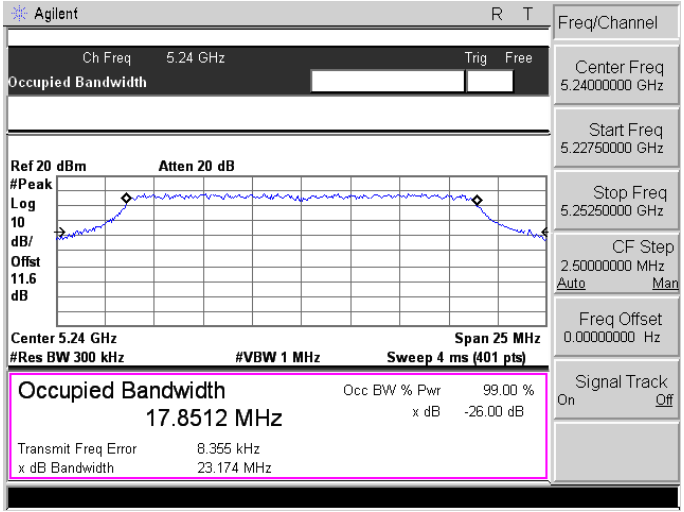
7.6. Test Graphs

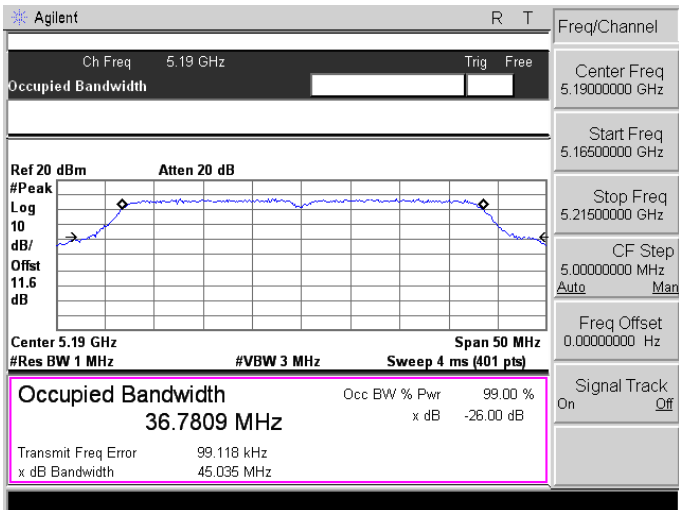
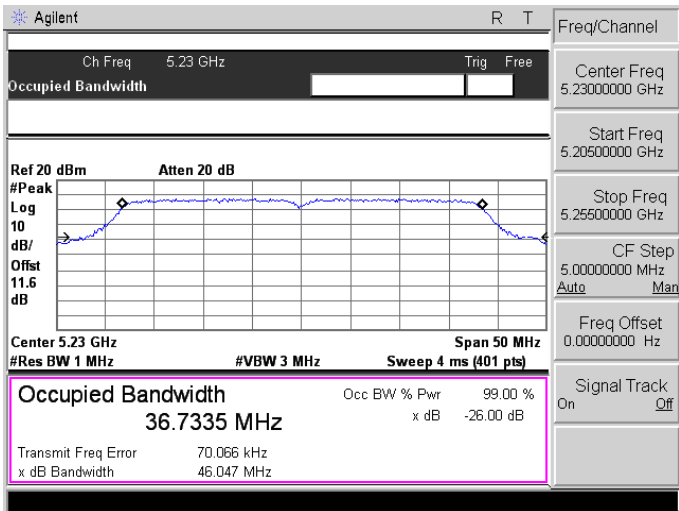
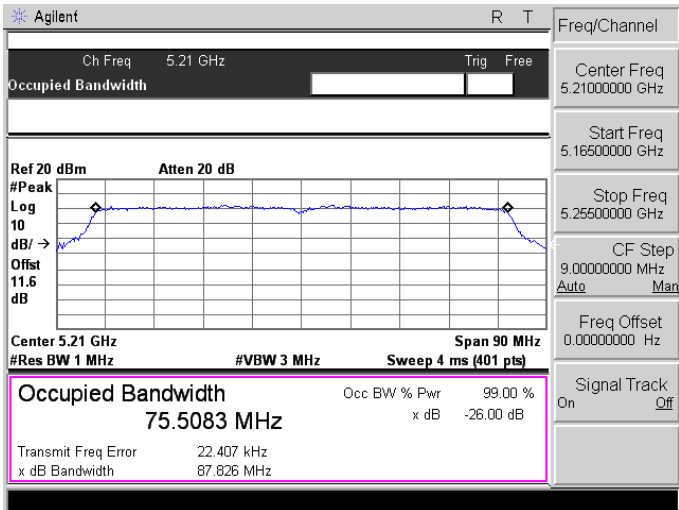
5180	 Mode 2: IEEE 802.11a Link Mode_ ANT-0 Agilent R T Ch Freq 5.18 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.18 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.8042 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -6.112 kHz x dB Bandwidth 22.738 MHz Freq/Channel Center Freq 5.18000000 GHz Start Freq 5.16750000 GHz Stop Freq 5.19250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5200	 Agilent R T Ch Freq 5.2 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.2 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.7635 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -19.133 kHz x dB Bandwidth 22.268 MHz Freq/Channel Center Freq 5.20000000 GHz Start Freq 5.18750000 GHz Stop Freq 5.21250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5240	 Agilent R T Ch Freq 5.24 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.24 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.8195 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -4.599 kHz x dB Bandwidth 22.866 MHz Freq/Channel Center Freq 5.24000000 GHz Start Freq 5.22750000 GHz Stop Freq 5.25250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

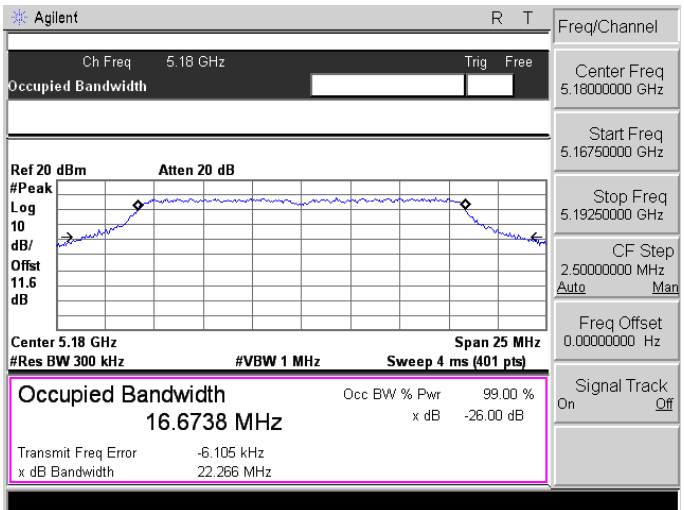
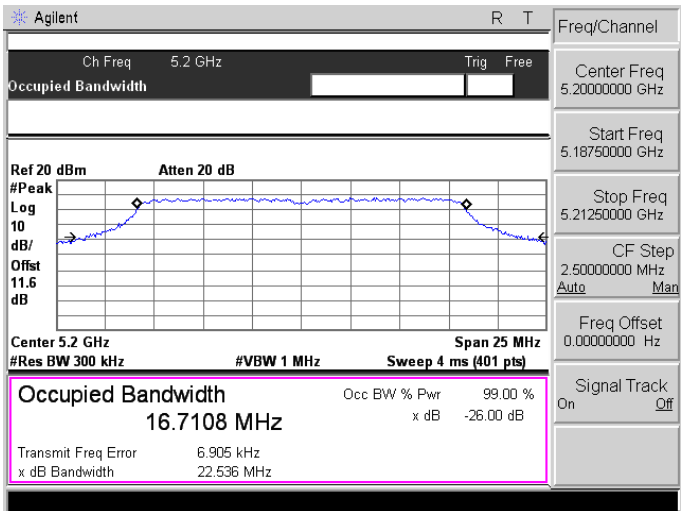
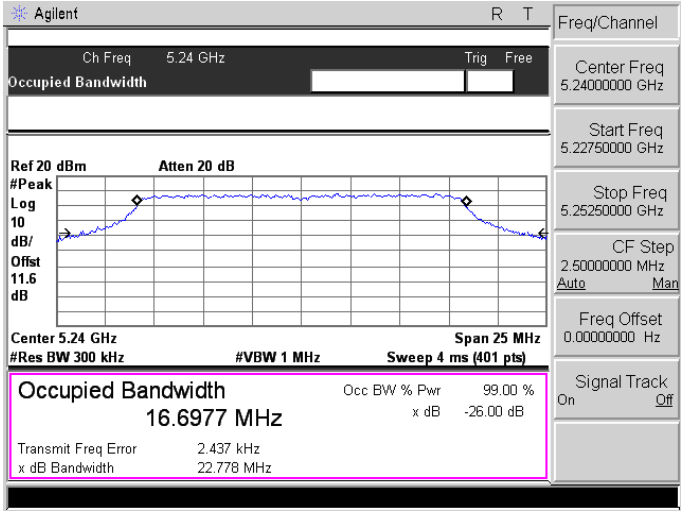
Mode 3: IEEE 802.11n 20MHz Link Mode_ ANT-0	
5180	 Agilent R T Ch Freq 5.18 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.18 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8814 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -6.320 kHz x dB Bandwidth 23.153 MHz Freq/Channel Center Freq 5.18000000 GHz Start Freq 5.16750000 GHz Stop Freq 5.19250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5200	 Agilent R T Ch Freq 5.2 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.2 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8898 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -16.502 kHz x dB Bandwidth 23.145 MHz Freq/Channel Center Freq 5.20000000 GHz Start Freq 5.18750000 GHz Stop Freq 5.21250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5240	 Agilent R T Ch Freq 5.24 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.24 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8859 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -31.775 kHz x dB Bandwidth 22.984 MHz Freq/Channel Center Freq 5.24000000 GHz Start Freq 5.22750000 GHz Stop Freq 5.25250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

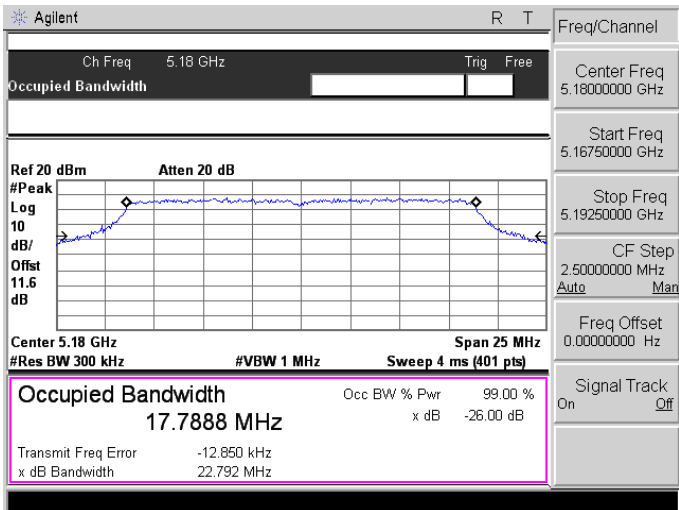
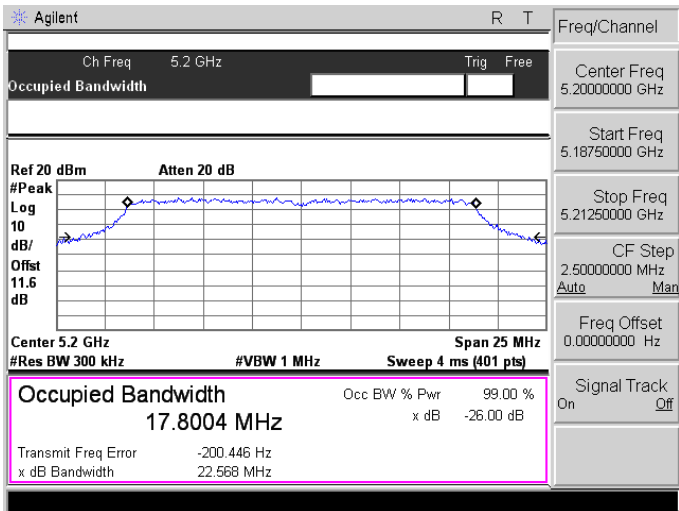
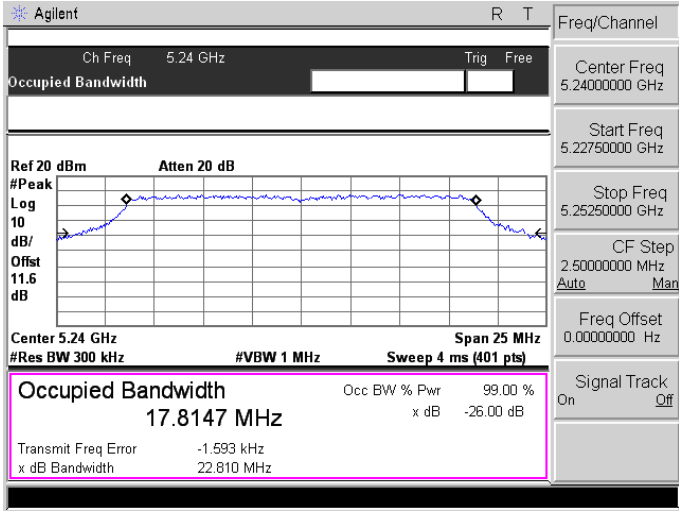
Mode 4: IEEE 802.11n 40MHz Link Mode_ ANT-0	
5190	Agilent R T Ch Freq 5.19 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.19 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 37.0208 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 73.289 kHz x dB Bandwidth 45.343 MHz Freq/Channel Center Freq 5.19000000 GHz Start Freq 5.16500000 GHz Stop Freq 5.21500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5230	Agilent R T Ch Freq 5.23 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.23 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.8220 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 44.331 kHz x dB Bandwidth 45.429 MHz Freq/Channel Center Freq 5.23000000 GHz Start Freq 5.20500000 GHz Stop Freq 5.25500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
Mode 5: IEEE 802.11ac 80MHz Link Mode_ ANT-0	
5210	Agilent R T Ch Freq 5.21 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.21 GHz Span 90 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 75.7672 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 57.849 kHz x dB Bandwidth 87.895 MHz Freq/Channel Center Freq 5.21000000 GHz Start Freq 5.16500000 GHz Stop Freq 5.25500000 GHz CF Step 9.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 2: IEEE 802.11a Link Mode_ ANT-1	
5180	 Agilent R T Ch Freq 5.18 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.18 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.7321 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -47.064 kHz x dB Bandwidth 22.050 MHz Freq/Channel Center Freq 5.18000000 GHz Start Freq 5.16750000 GHz Stop Freq 5.19250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5200	 Agilent R T Ch Freq 5.2 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.2 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.7251 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -46.708 kHz x dB Bandwidth 22.239 MHz Freq/Channel Center Freq 5.20000000 GHz Start Freq 5.18750000 GHz Stop Freq 5.21250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5240	 Agilent R T Ch Freq 5.24 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.24 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.7555 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -22.084 kHz x dB Bandwidth 23.009 MHz Freq/Channel Center Freq 5.24000000 GHz Start Freq 5.22750000 GHz Stop Freq 5.25250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 3: IEEE 802.11n 20MHz Link Mode_ ANT-1	
5180	 Agilent R T Ch Freq 5.18 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.18 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8142 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -9.502 kHz x dB Bandwidth 23.562 MHz Freq/Channel Center Freq 5.18000000 GHz Start Freq 5.16750000 GHz Stop Freq 5.19250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5200	 Agilent R T Ch Freq 5.2 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.2 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8469 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -5.502 kHz x dB Bandwidth 22.604 MHz Freq/Channel Center Freq 5.20000000 GHz Start Freq 5.18750000 GHz Stop Freq 5.21250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5240	 Agilent R T Ch Freq 5.24 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.24 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8512 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 8.365 kHz x dB Bandwidth 23.174 MHz Freq/Channel Center Freq 5.24000000 GHz Start Freq 5.22750000 GHz Stop Freq 5.25250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 4: IEEE 802.11n 40MHz Link Mode_ ANT-1	
5190	 Agilent R T Ch Freq 5.19 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.19 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.7809 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 99.118 kHz x dB Bandwidth 45.035 MHz Freq/Channel Center Freq 5.19000000 GHz Start Freq 5.16500000 GHz Stop Freq 5.21500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5230	 Agilent R T Ch Freq 5.23 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.23 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.7335 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 70.066 kHz x dB Bandwidth 46.047 MHz Freq/Channel Center Freq 5.23000000 GHz Start Freq 5.20500000 GHz Stop Freq 5.25500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
Mode 5: IEEE 802.11ac 80MHz Link Mode_ ANT-1	
5210	 Agilent R T Ch Freq 5.21 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.21 GHz Span 90 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 75.5083 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 22.407 kHz x dB Bandwidth 87.826 MHz Freq/Channel Center Freq 5.21000000 GHz Start Freq 5.16500000 GHz Stop Freq 5.25500000 GHz CF Step 9.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 2: IEEE 802.11a Link Mode_ ANT-2	
5180	 Agilent R T Ch Freq 5.18 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.18 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.6738 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -6.105 kHz x dB Bandwidth 22.266 MHz Freq/Channel Center Freq 5.18000000 GHz Start Freq 5.16750000 GHz Stop Freq 5.19250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5200	 Agilent R T Ch Freq 5.2 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.2 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.7108 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 6.905 kHz x dB Bandwidth 22.536 MHz Freq/Channel Center Freq 5.20000000 GHz Start Freq 5.18750000 GHz Stop Freq 5.21250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5240	 Agilent R T Ch Freq 5.24 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.24 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.6977 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 2.437 kHz x dB Bandwidth 22.778 MHz Freq/Channel Center Freq 5.24000000 GHz Start Freq 5.22750000 GHz Stop Freq 5.25250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 3: IEEE 802.11n 20MHz Link Mode_ ANT-2	
5180	 Agilent R T Ch Freq 5.18 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.18 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.7888 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -12.850 kHz x dB Bandwidth 22.792 MHz Freq/Channel Center Freq 5.18000000 GHz Start Freq 5.16750000 GHz Stop Freq 5.19250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5200	 Agilent R T Ch Freq 5.2 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.2 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8004 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -200.446 Hz x dB Bandwidth 22.568 MHz Freq/Channel Center Freq 5.20000000 GHz Start Freq 5.18750000 GHz Stop Freq 5.21250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5240	 Agilent R T Ch Freq 5.24 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.24 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8147 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.593 kHz x dB Bandwidth 22.810 MHz Freq/Channel Center Freq 5.24000000 GHz Start Freq 5.22750000 GHz Stop Freq 5.25250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 4: IEEE 802.11n 40MHz Link Mode_ ANT-2	
5190	Agilent R T Ch Freq 5.19 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.19 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.7539 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 78.090 kHz x dB Bandwidth 45.133 MHz Freq/Channel Center Freq 5.19000000 GHz Start Freq 5.16500000 GHz Stop Freq 5.21500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5230	Agilent R T Ch Freq 5.23 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.23 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.5364 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 136.751 kHz x dB Bandwidth 44.404 MHz Freq/Channel Center Freq 5.23000000 GHz Start Freq 5.20500000 GHz Stop Freq 5.25500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
Mode 5: IEEE 802.11ac 80MHz Link Mode_ ANT-2	
5210	Agilent R T Ch Freq 5.21 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.21 GHz Span 90 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 75.6865 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 273.152 kHz x dB Bandwidth 87.017 MHz Freq/Channel Center Freq 5.21000000 GHz Start Freq 5.16500000 GHz Stop Freq 5.25500000 GHz CF Step 9.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

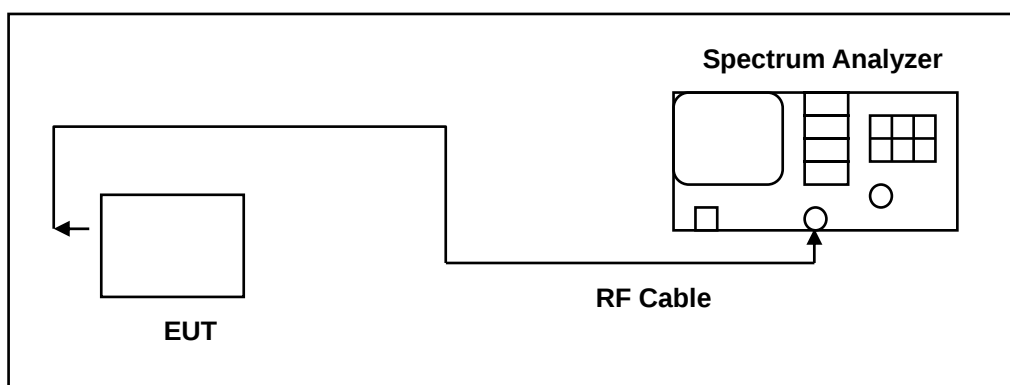
8 6dB RF Bandwidth Measurement

8.1. Limit

6dB RF Bandwidth

Systems using digital modulation techniques may operate in the 5725~5850MHz bands. The minimum 6 dB band-width shall be at least 500 kHz.

8.2. Test Setup



8.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/16/2014	(1)
Test Site	ATL	TE05	TE05	N.C.R.	-----

dRemark: (1) Calibration period 1 year. (2) Calibration period 2 years. (3) Calibration period 3 years.

Note: N.C.R. = No Calibration Request.

8.4. Test Procedure

6dB RF Bandwidth

The EUT tested to UNII test procedure of KDB789033 D02 for compliance to FCC 47CFR 15.407 requirements.

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RES BW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A peak output reading was taken, a DISPLAY line was drawn 6 dB lower than peak level. The 6 dB bandwidth was determined from where the channel output spectrum intersected the display line.

The test was performed at 3 channels.

8.5. Test Result

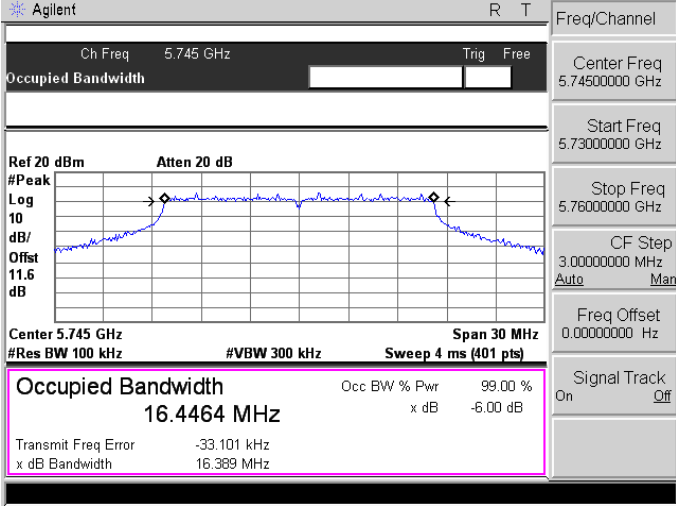
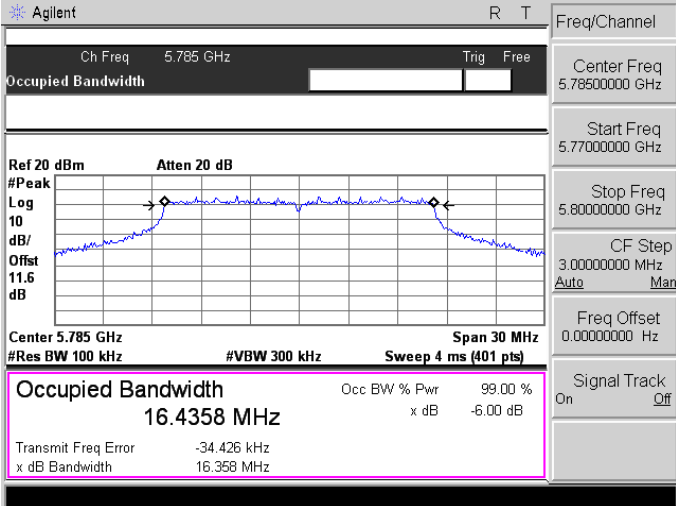
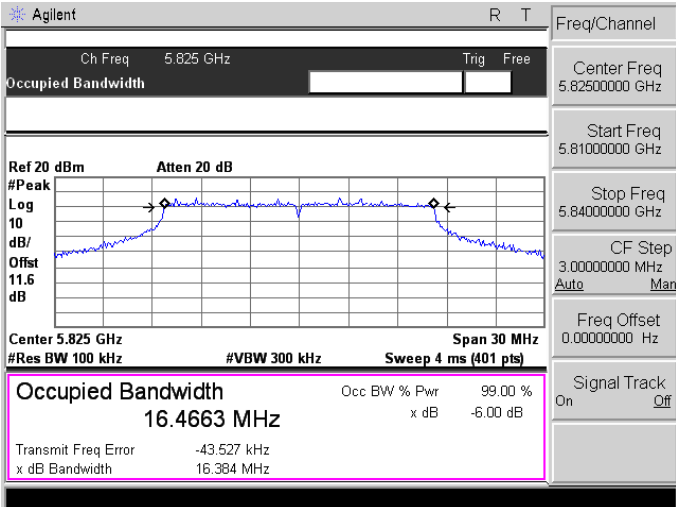
Model Number	UAP-AC-PRO			
Test Item	6dB RF Bandwidth			
Test Mode	Mode 2: IEEE 802.11a Link Mode			
Date of Test	08/20/2015			Test Site TE05
Frequency (MHz)	ANT-0	ANT-1	ANT-2	Limit (kHz)
5745	16389.000	16334.000	16387.000	> 500
5785	16358.000	16418.000	16375.000	> 500
5825	16384.000	16381.000	16388.000	> 500

Model Number	UAP-AC-PRO			
Test Item	6dB RF Bandwidth			
Test Mode	Mode 3: IEEE 802.11n 20MHz Link Mode			
Date of Test	06/17/2015			Test Site TE05
Frequency (MHz)	ANT-0	ANT-1	ANT-2	Limit (kHz)
5745	17568.000	17645.000	17613.000	> 500
5785	17584.000	17634.000	17620.000	> 500
5825	17586.000	17602.000	17640.000	> 500

Model Number	UAP-AC-PRO			
Test Item	6dB RF Bandwidth			
Test Mode	Mode 4: IEEE 802.11n 40MHz Link Mode			
Date of Test	06/17/2015			Test Site TE05
Frequency (MHz)	ANT-0	ANT-1	ANT-2	Limit (kHz)
5755	35773.000	36318.000	36314.000	> 500
5795	36085.000	36389.000	36082.000	> 500

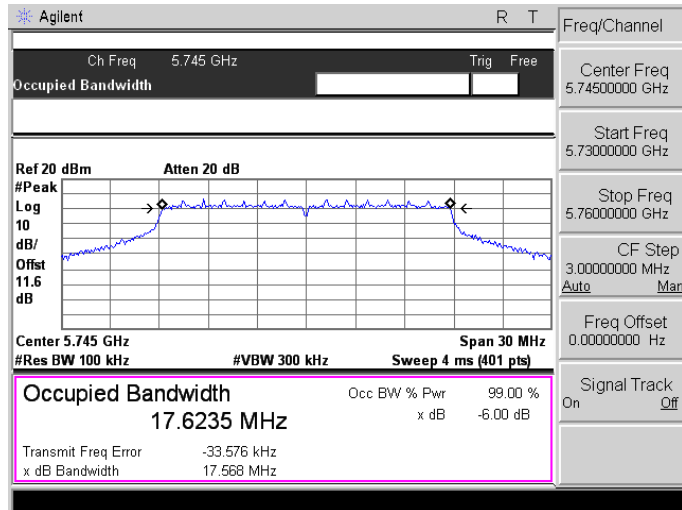
Model Number	UAP-AC-PRO			
Test Item	6dB RF Bandwidth			
Test Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode			
Date of Test	06/17/2015			Test Site TE05
Frequency (MHz)	ANT-0	ANT-1	ANT-2	Limit (kHz)
5775	76133.000	76324.000	75983.000	> 500

8.6. Test Graphs

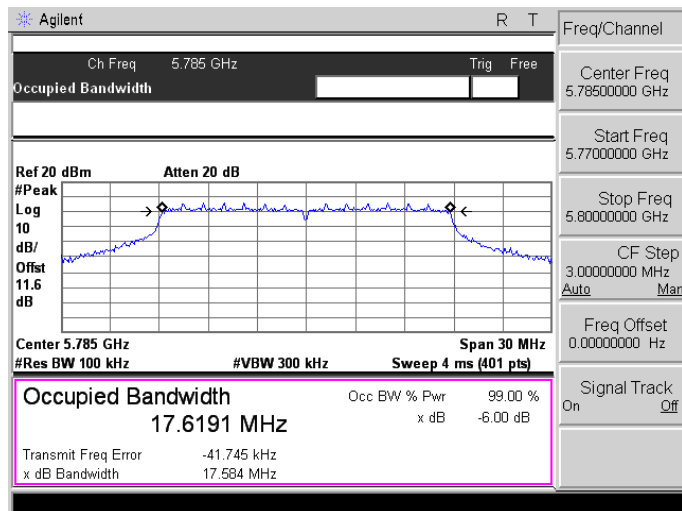
Mode 2: IEEE 802.11a Link Mode_ANT-0	
5745	 Agilent R T Ch Freq 5.745 GHz Trig Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.745 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.4464 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -33.101 kHz x dB Bandwidth 16.389 MHz Freq/Channel Center Freq 5.74500000 GHz Start Freq 5.73000000 GHz Stop Freq 5.76000000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5785	 Agilent R T Ch Freq 5.785 GHz Trig Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.785 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.4358 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -34.426 kHz x dB Bandwidth 16.358 MHz Freq/Channel Center Freq 5.78500000 GHz Start Freq 5.77000000 GHz Stop Freq 5.80000000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5825	 Agilent R T Ch Freq 5.825 GHz Trig Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.825 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.4663 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -43.527 kHz x dB Bandwidth 16.384 MHz Freq/Channel Center Freq 5.82500000 GHz Start Freq 5.81000000 GHz Stop Freq 5.84000000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 3: IEEE 802.11n 20MHz Link Mode_ANT-0

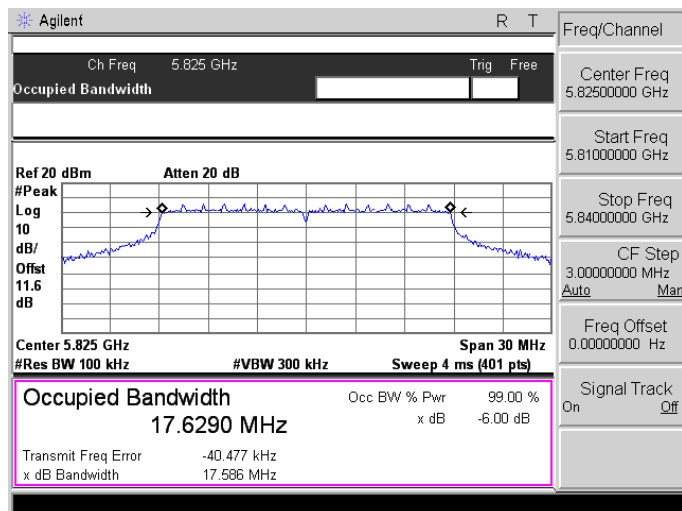
5745



5785

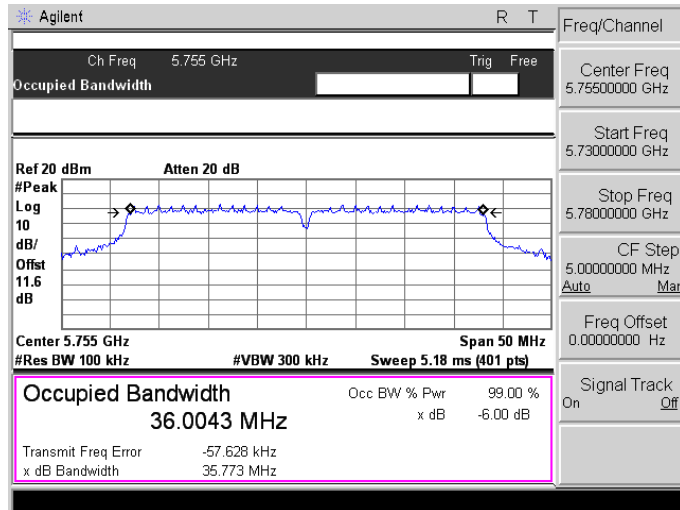


5825

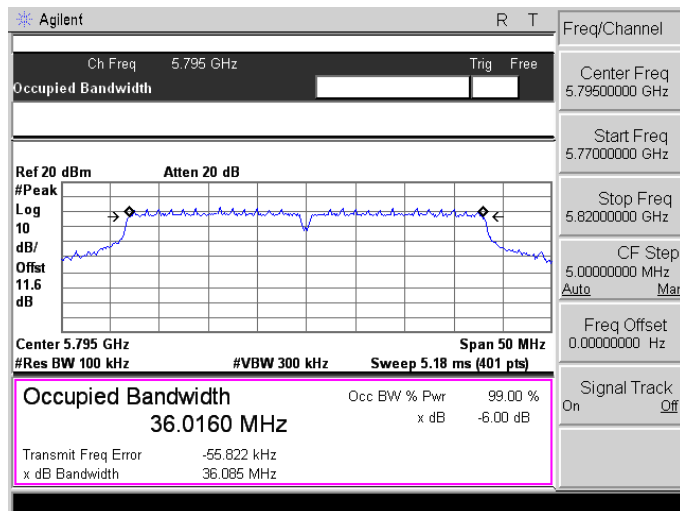


Mode 4: IEEE 802.11n 40MHz Link Mode_ANT-0

5755

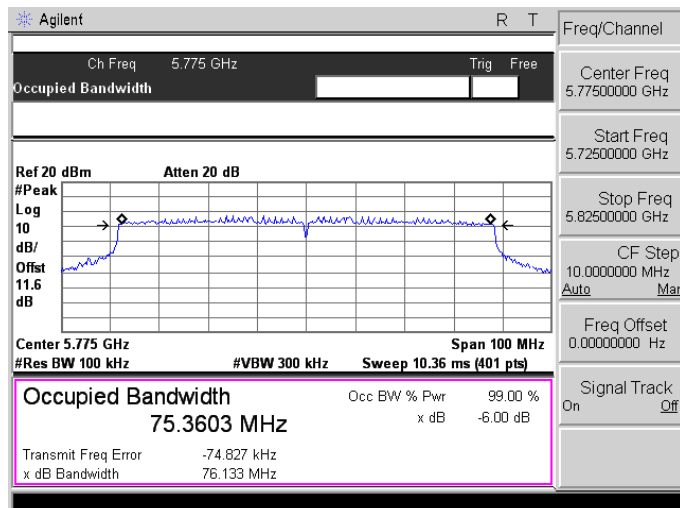


5795



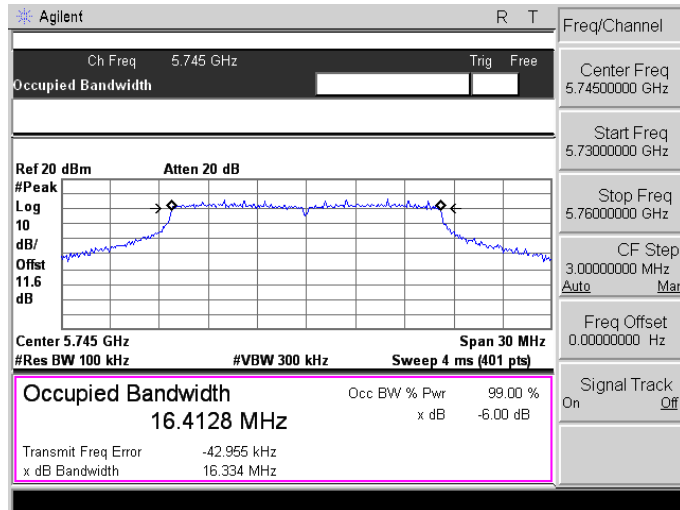
Mode 5: IEEE 802.11ac 80MHz Link Mode_ANT-0

5775

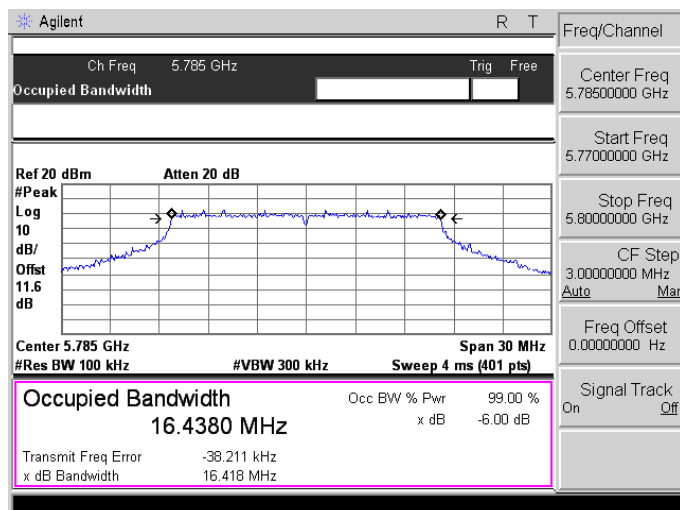


Mode 2: IEEE 802.11a Link Mode_ANT-1

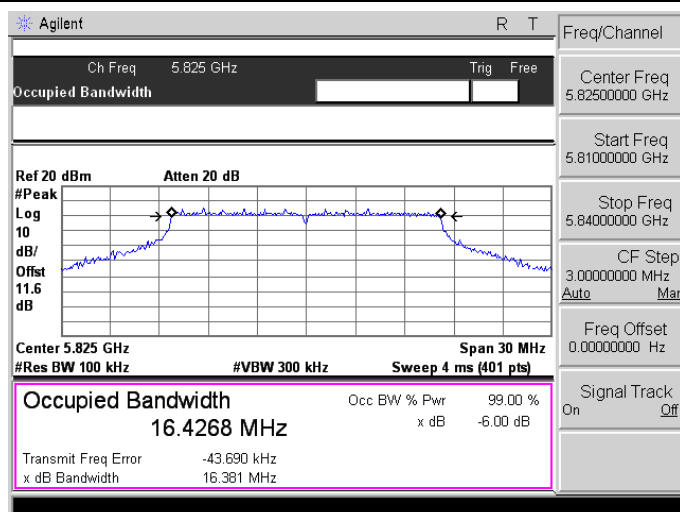
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5785

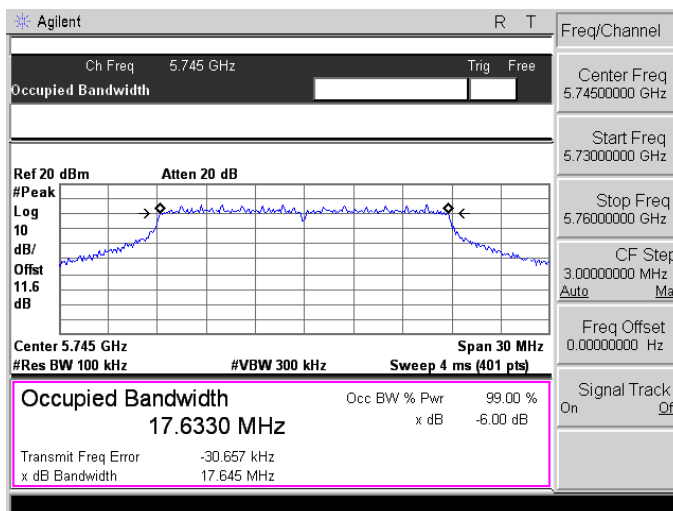


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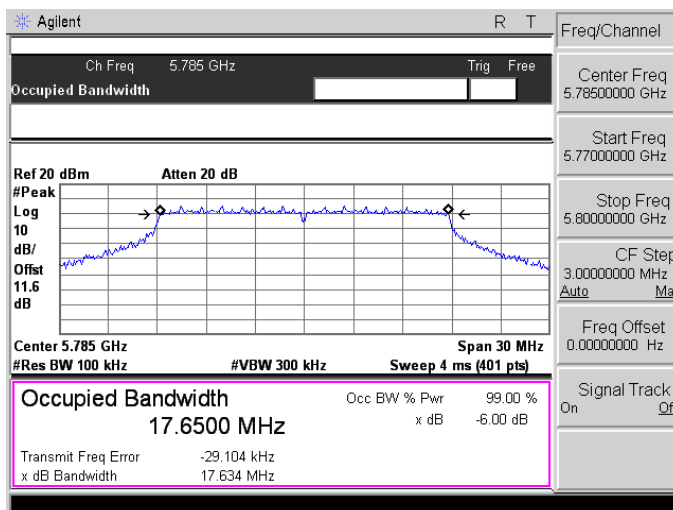


Mode 3: IEEE 802.11n 20MHz Link Mode_ANT-1

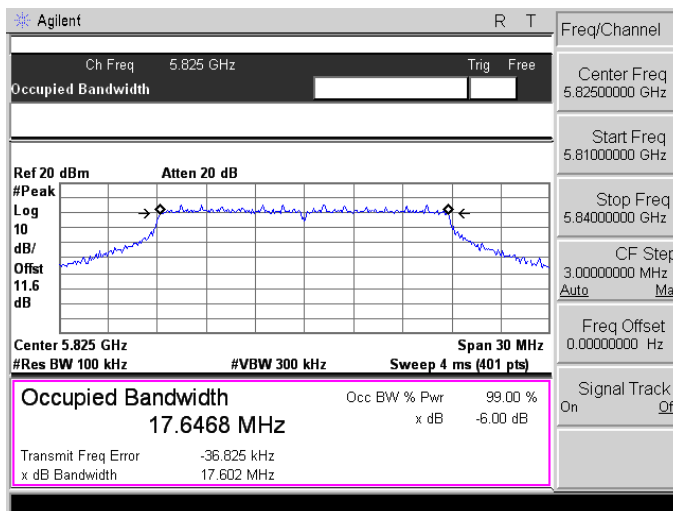
5745



5785

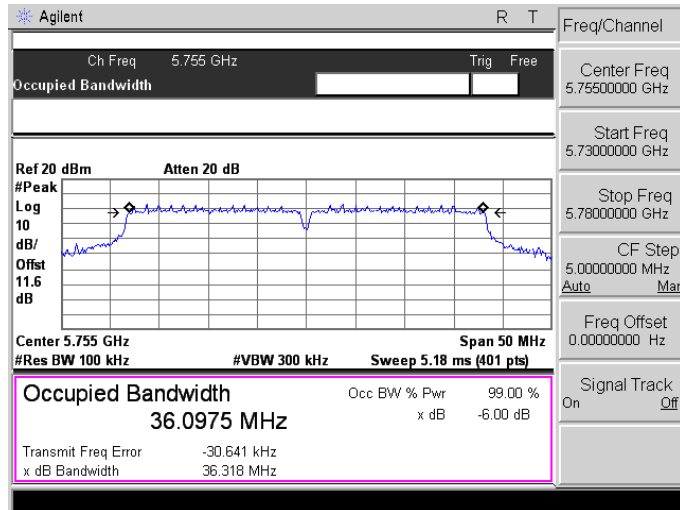


5825

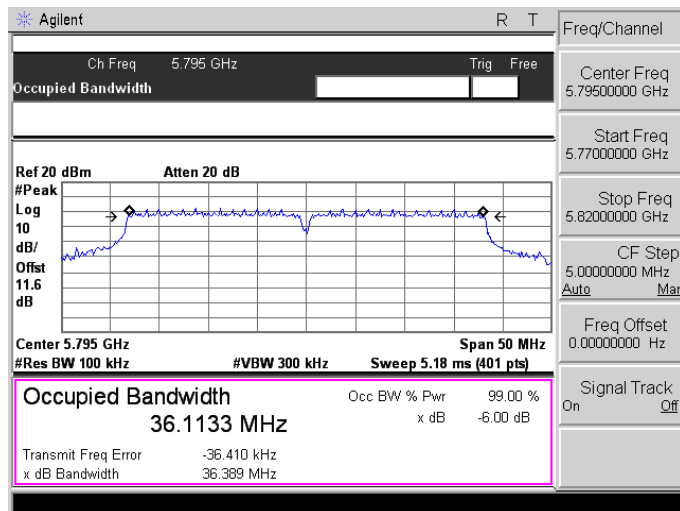


Mode 4: IEEE 802.11n 40MHz Link Mode_ANT-1

5755

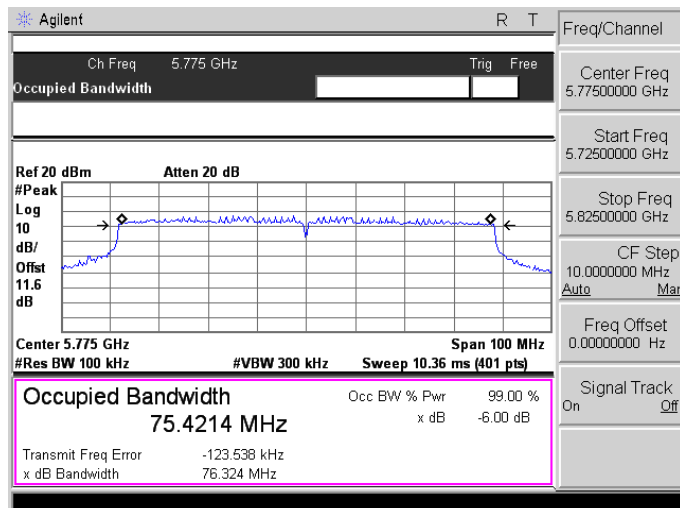


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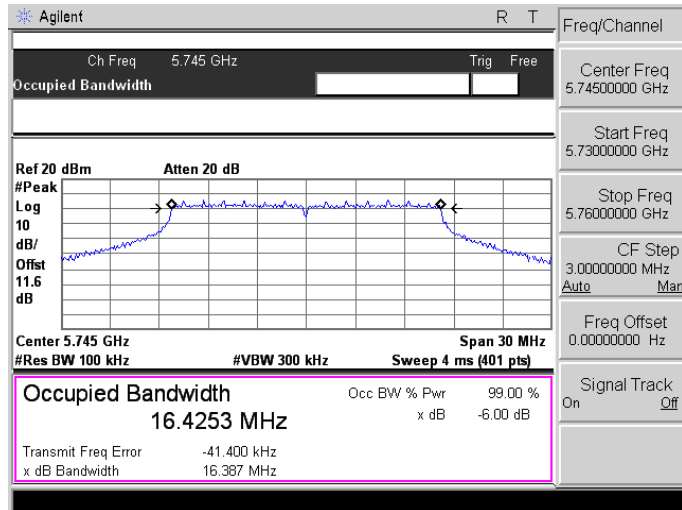
Mode 5: IEEE 802.11ac 80MHz Link Mode_ANT-1

5775

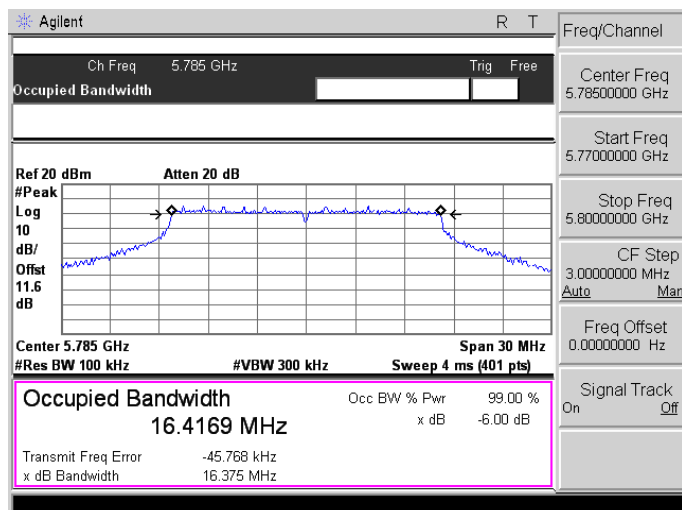


Mode 2: IEEE 802.11a Link Mode_ANT-2

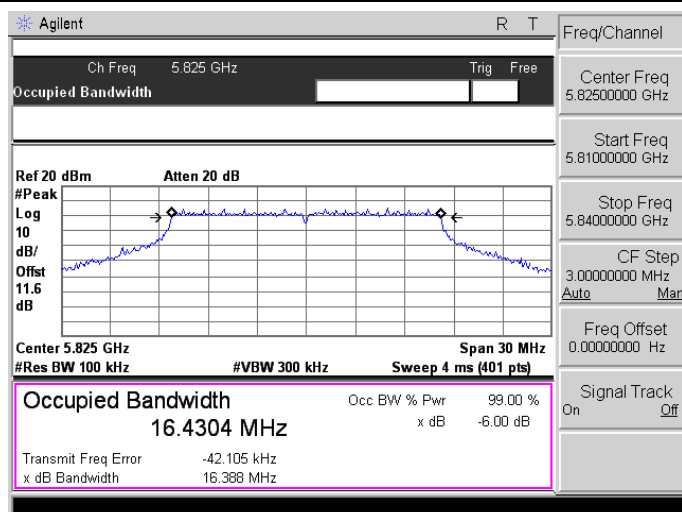
5745



5785

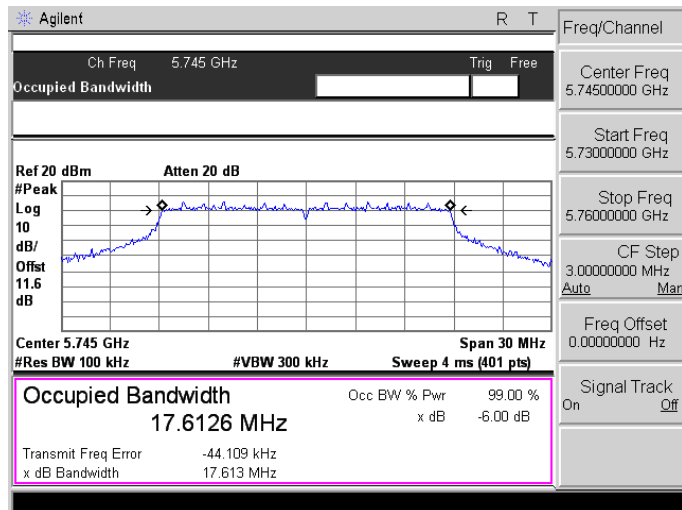


5825

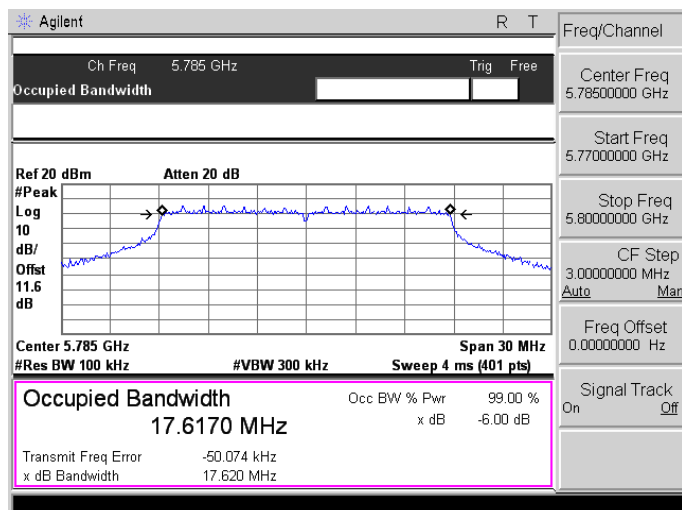


Mode 3: IEEE 802.11n 20MHz Link Mode_ANT-2

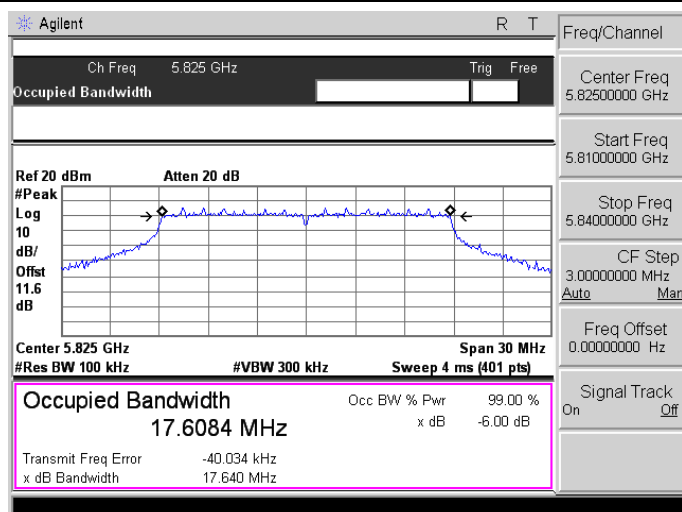
5745



5785

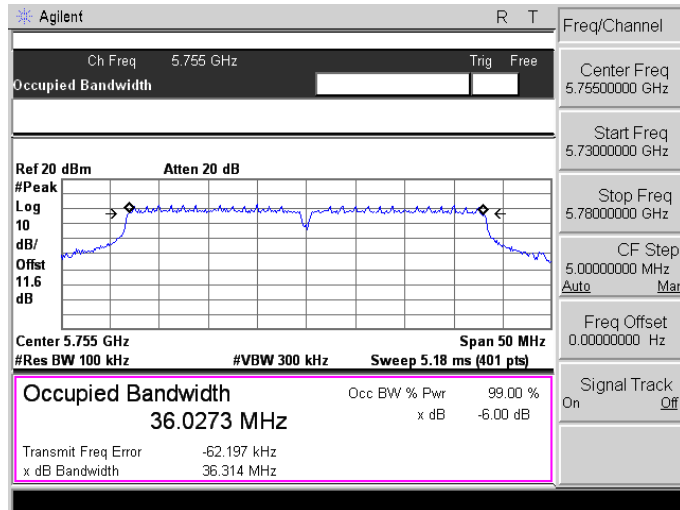


5825

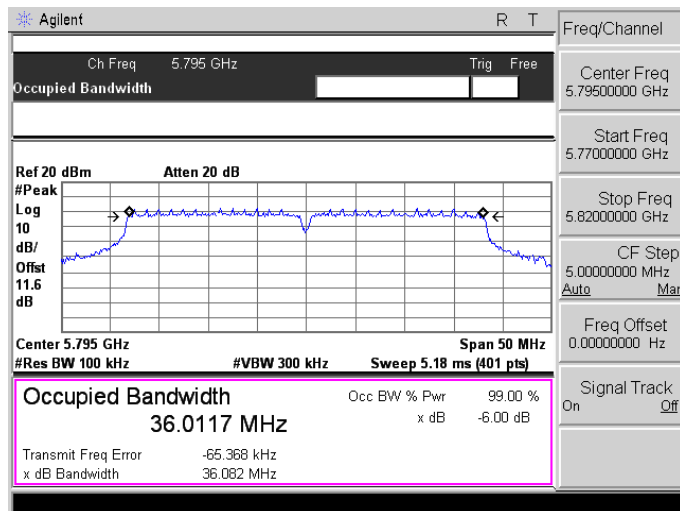


Mode 4: IEEE 802.11n 40MHz Link Mode_ANT-2

5755

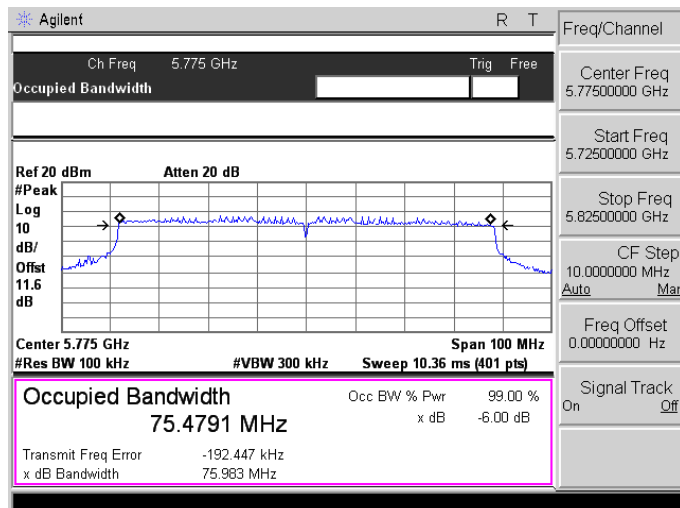


5795



Mode 5: IEEE 802.11ac 80MHz Link Mode_ANT-2

5775



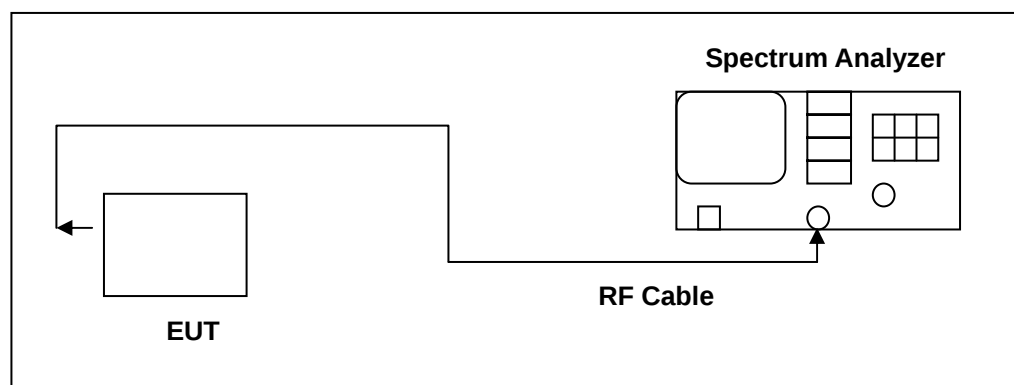
9 Peak Power Spectral Density Measurement

9.1. Limit

Conducted power spectral density

Frequency Range (MHz)	FCC Limit
5.150 ~ 5.250 GHz	17 dBm/MHz
5.250 ~ 5.350 GHz	11 dBm/MHz
5.470 ~ 5.725 GHz	11 dBm/MHz
5.725 ~ 5.850 GHz	30 dBm/500KHz

9.2. Test Setup



9.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/16/2014	(1)
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

Note: N.C.R. = No Calibration Request.

9.4. Test Procedure

The test is performed in accordance with KDB789033: D02 General UNII Test Procedures New Rules v01, Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E.

Note: Total power spectral density = conducted power density(Ant-0+Ant-1+...+Ant-n) + Duty factor.

9.5. Test Result

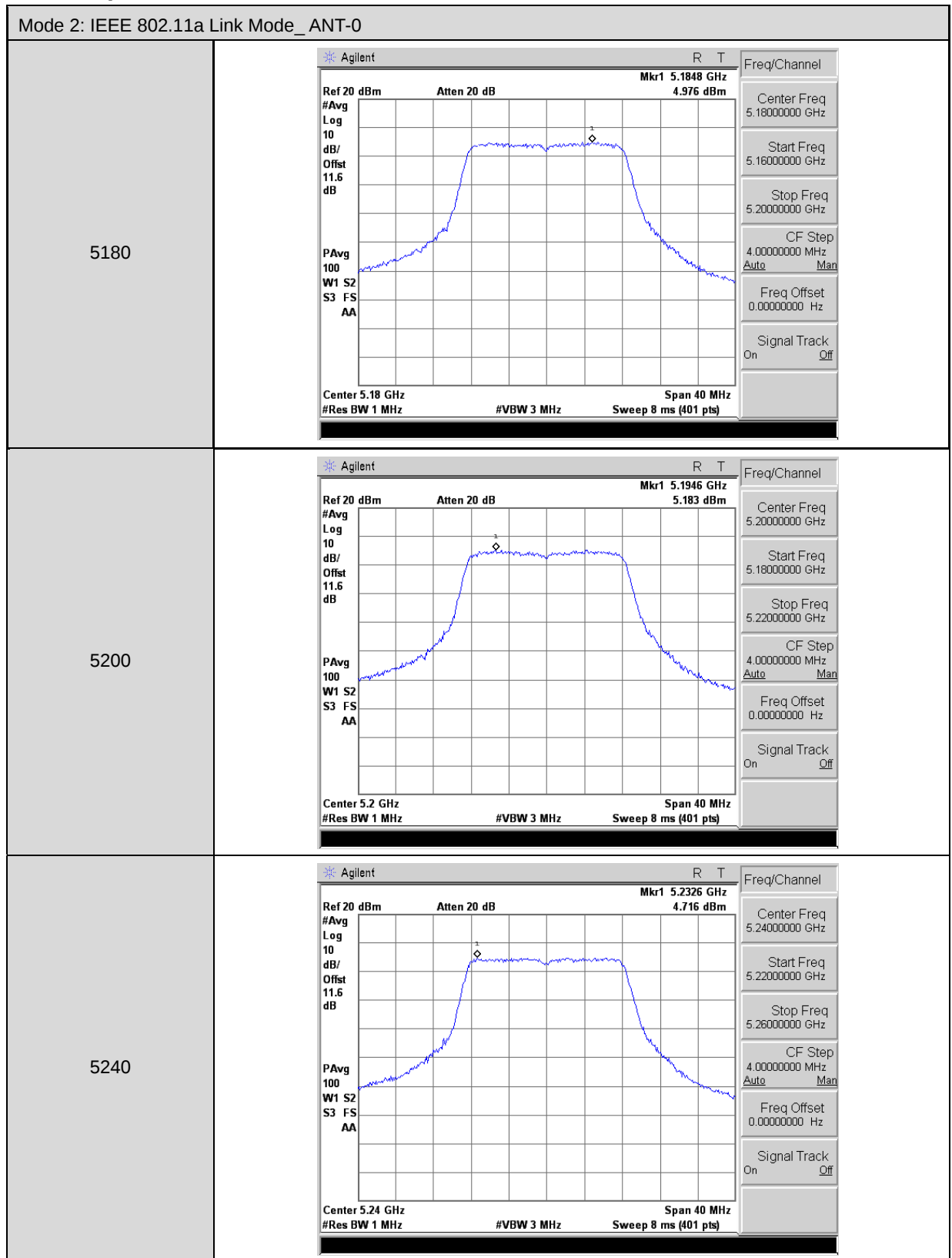
Model Number	UAP-AC-PRO				
Test Item	Conducted power spectral density				
Test Mode	Mode 2: IEEE 802.11a Link Mode				
Date of Test	08/20/2015			Test Site	TE02
Frequency (MHz)	ANT-0	ANT-1	ANT-2	ANT-0+1+2	Limit (dBm/MHz)
	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)	
5180	4.976	4.445	4.368	9.531	<17
5200	5.183	4.235	4.163	9.479	
5240	4.716	4.328	4.301	9.379	
Frequency (MHz)	ANT-0		ANT-1		Limit (dBm/500KHz)
	Measurement (dBm/100KHz)	Measurement (dBm/500KHz)	Measurement (dBm/100KHz)	Measurement (dBm/500KHz)	
5745	-3.10	3.89	-3.16	3.83	< 30
5785	-3.26	3.73	-3.41	3.58	
5825	-2.85	4.14	-3.78	3.21	
Frequency (MHz)	ANT-2		ANT-0+1+2		Limit (dBm/500KHz)
	Measurement (dBm/100KHz)	Measurement (dBm/500KHz)	Measurement (dBm/500KHz)		
5745	-3.36	3.63	8.71		< 30
5785	-3.67	3.32	8.47		
5825	-3.97	3.02	8.41		

Model Number	UAP-AC-PRO				
Test Item	Conducted power spectral density				
Test Mode	Mode 3: IEEE 802.11n 20MHz Link Mode				
Date of Test	08/20/2015			Test Site	TE02
Frequency (MHz)	ANT-0	ANT-1	ANT-2	ANT-0+1+2	Limit (dBm/MHz)
	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)	
5180	3.788	3.427	3.207	8.574	<17
5200	3.987	3.426	2.998	8.582	
5240	3.820	3.679	3.070	8.628	
Frequency (MHz)	ANT-0		ANT-1		Limit (dBm/500KHz)
	Measurement (dBm/100KHz)	Measurement (dBm/500KHz)	Measurement (dBm/100KHz)	Measurement (dBm/500KHz)	
5745	-2.98	4.01	-3.49	3.50	< 30
5785	-3.63	3.36	-3.65	3.34	
5825	-3.76	3.23	-3.89	3.10	
Frequency (MHz)	ANT-2		ANT-0+1+2		Limit (dBm/500KHz)
	Measurement (dBm/100KHz)	Measurement (dBm/500KHz)	Measurement (dBm/500KHz)		
5745	-3.86	3.13	8.66		< 30
5785	-4.09	2.90	8.30		
5825	-4.21	2.78	8.13		

Model Number	UAP-AC-PRO				
Test Item	Conducted power spectral density				
Test Mode	Mode 4: IEEE 802.11n 40MHz Link Mode				
Date of Test	08/20/2015		Test Site	TE02	
Frequency (MHz)	ANT-0	ANT-1	ANT-2	ANT-0+1+2	Limit (dBm/MHz)
	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)	
5190	-2.908	-3.207	-3.794	2.209	<17
5230	-2.464	-2.902	-3.346	2.608	
Frequency (MHz)	ANT-0		ANT-1		Limit (dBm/500KHz)
	Measurement (dBm/100KHz)	Measurement (dBm/500KHz)	Measurement (dBm/100KHz)	Measurement (dBm/500KHz)	
5755	-7.25	-0.26	-7.40	-0.41	< 30
5795	-6.99	0.00	-7.55	-0.56	
Frequency (MHz)	ANT-2		ANT-0+1+2		Limit (dBm/500KHz)
	Measurement (dBm/100KHz)	Measurement (dBm/500KHz)	Measurement (dBm/500KHz)		
5755	-7.47	-0.48	5.12		< 30
5795	-7.84	-0.85	5.04		

Model Number	UAP-AC-PRO				
Test Item	Conducted power spectral density				
Test Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode				
Date of Test	08/20/2015		Test Site	TE02	
Frequency (MHz)	ANT-0	ANT-1	ANT-2	ANT-0+1	Limit (dBm/MHz)
	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)	
5210	-7.945	-8.030	-8.545	-2.794	<17
Frequency (MHz)	ANT-0		ANT-1		Limit (dBm/500KHz)
	Measurement (dBm/100KHz)	Measurement (dBm/500KHz)	Measurement (dBm/100KHz)	Measurement (dBm/500KHz)	
5755	-13.83	-6.84	-13.98	-6.99	< 30
Frequency (MHz)	ANT-0		ANT-1		Limit (dBm/500KHz)
	Measurement (dBm/100KHz)	Measurement (dBm/500KHz)	Measurement (dBm/500KHz)		
5755	-14.11	-7.12	-1.61		< 30

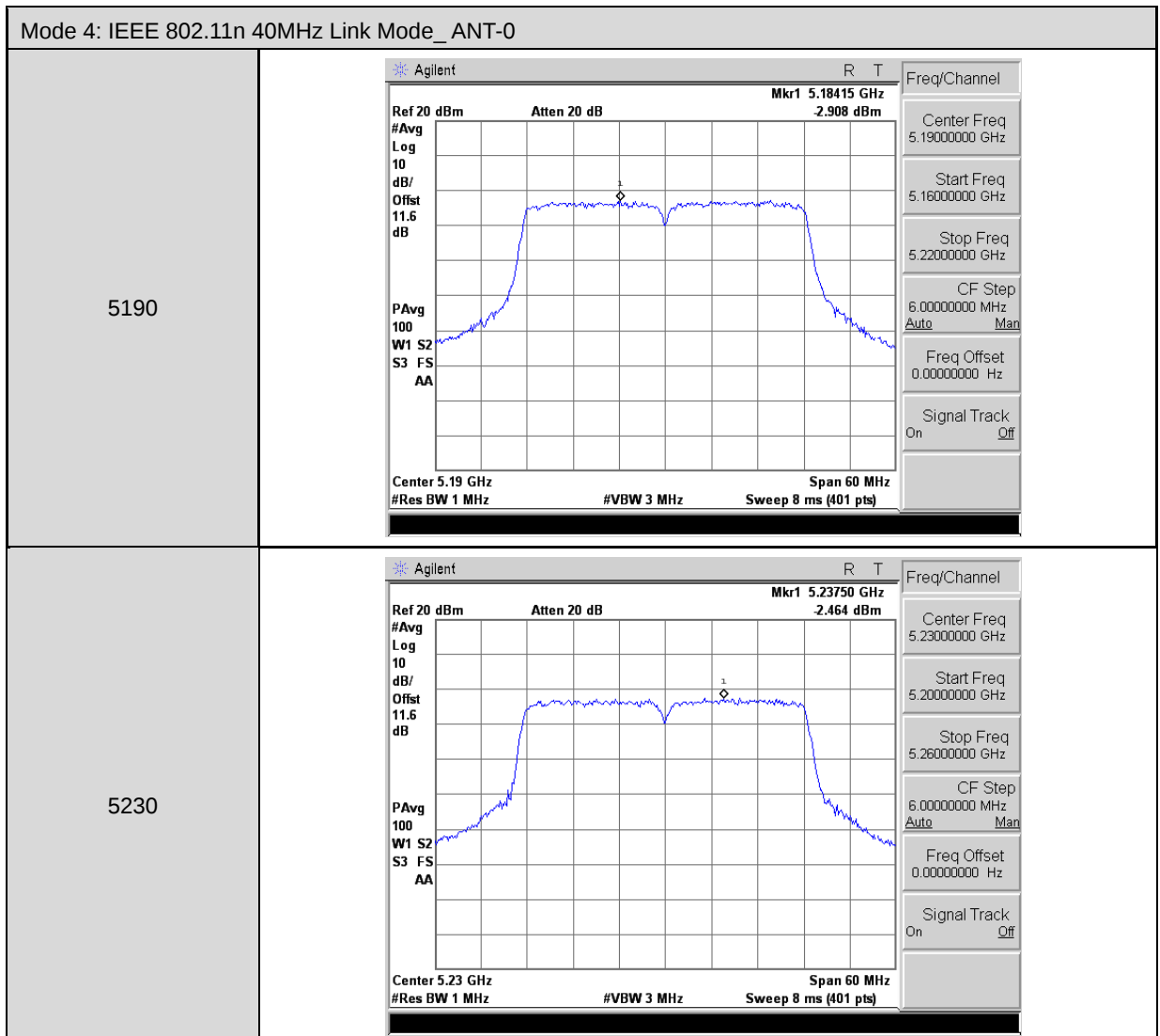
9.6. Test Graphs

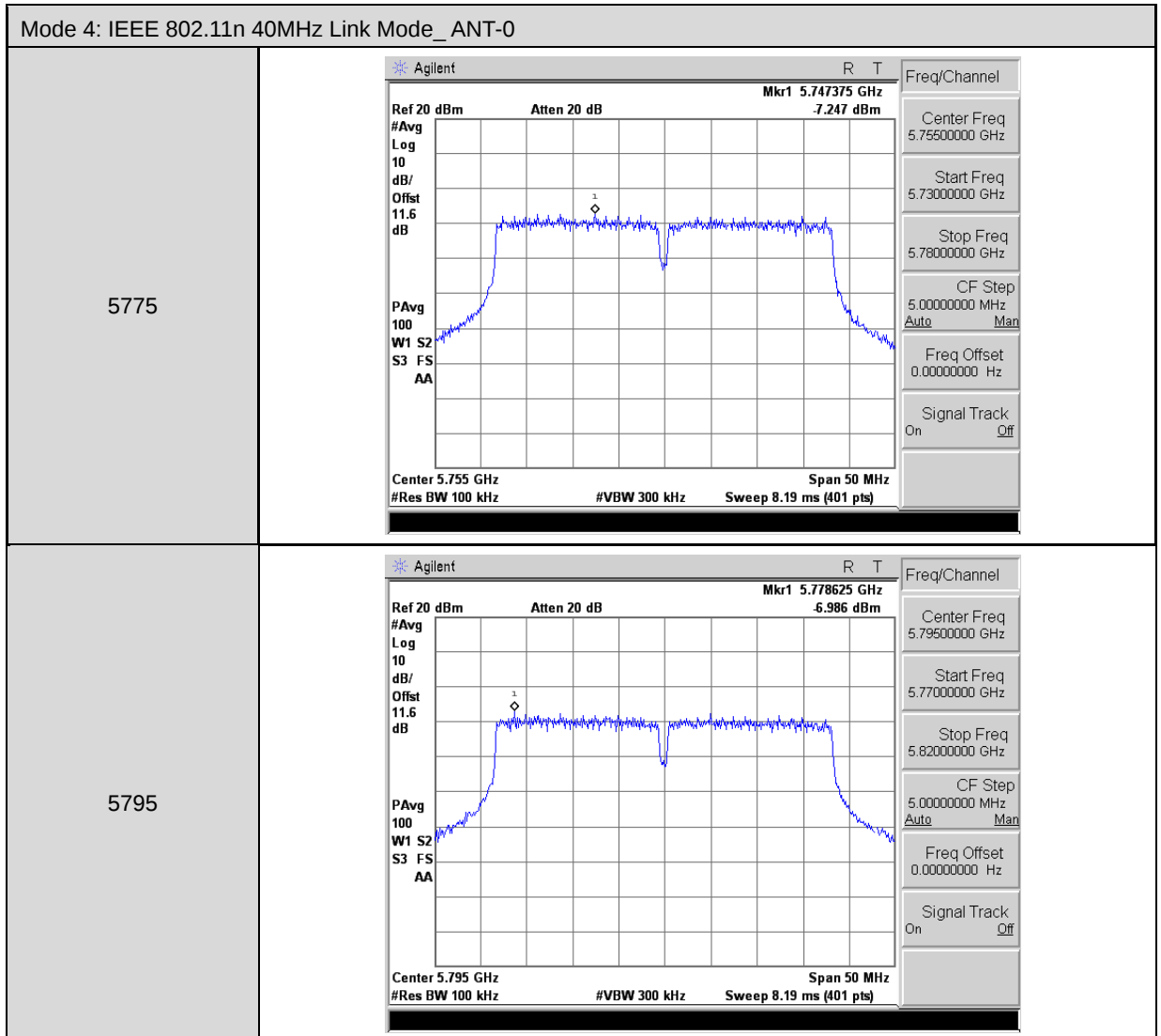


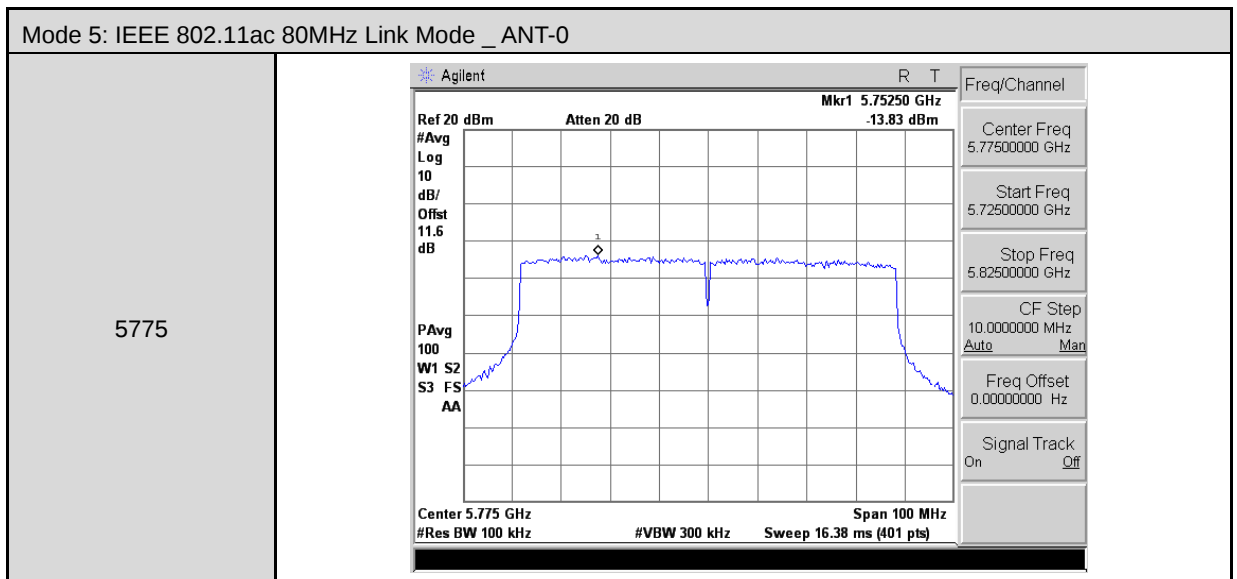
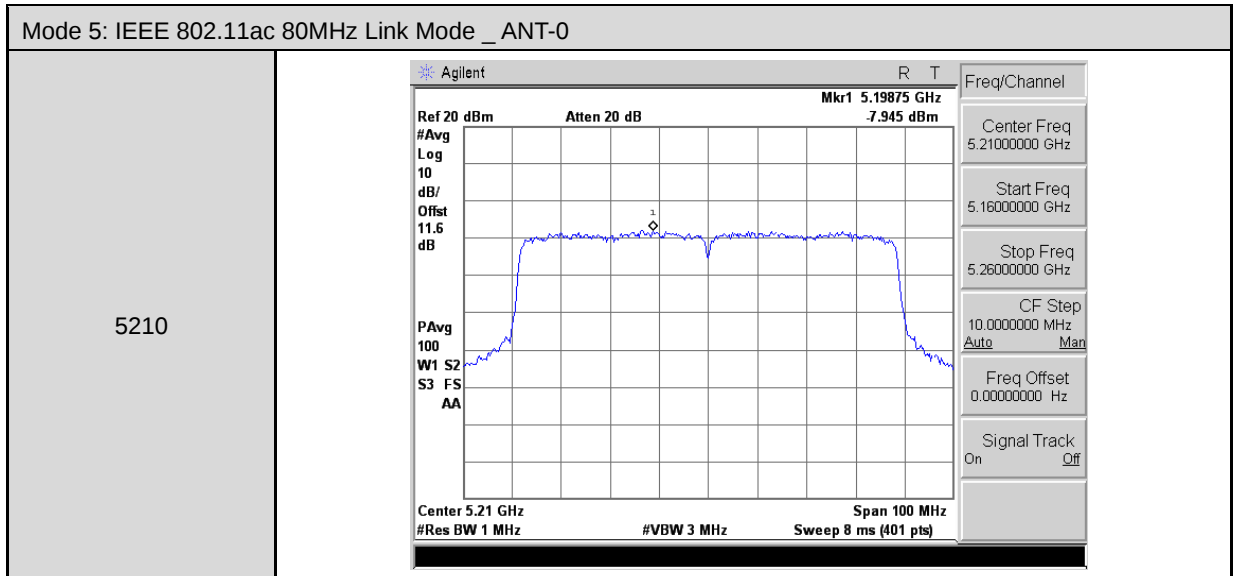
Mode 2: IEEE 802.11a Link Mode_ ANT-0	
5745	
5785	
5825	

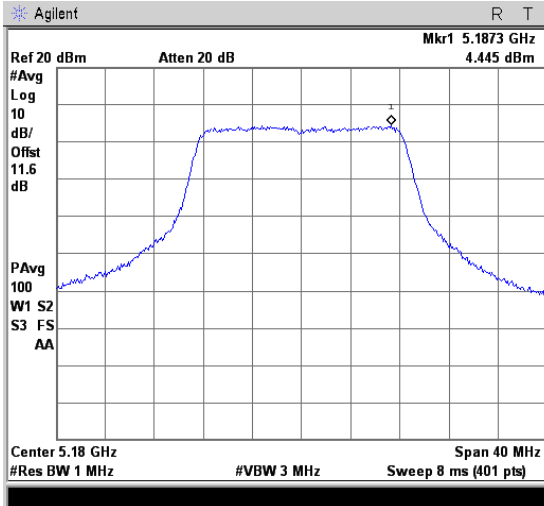
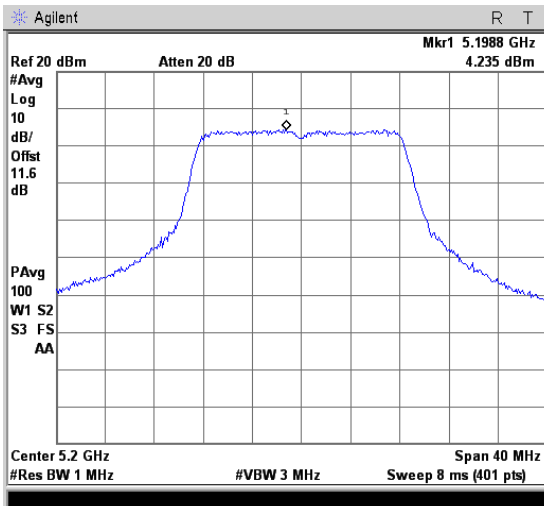
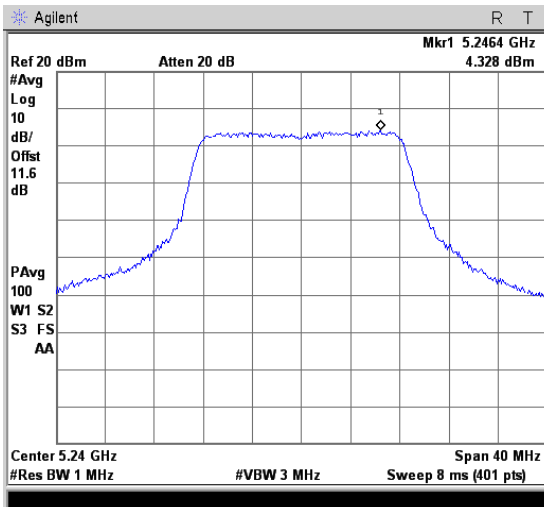
Mode 3: IEEE 802.11n 20MHz Link Mode _ANT-0	
5180	
5200	
5220	

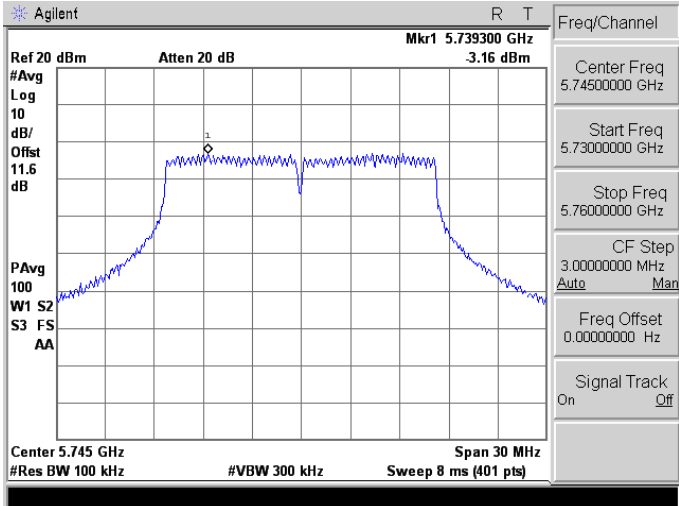
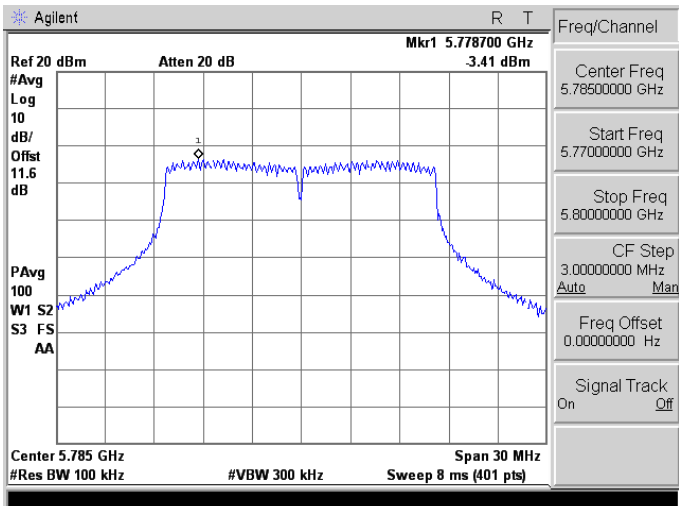
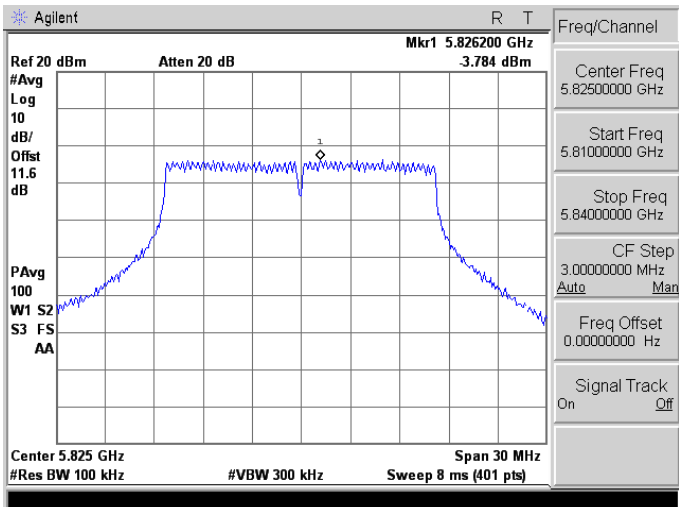
Mode 3: IEEE 802.11n 20MHz Link Mode _ANT-0	
5745	
5785	
5825	



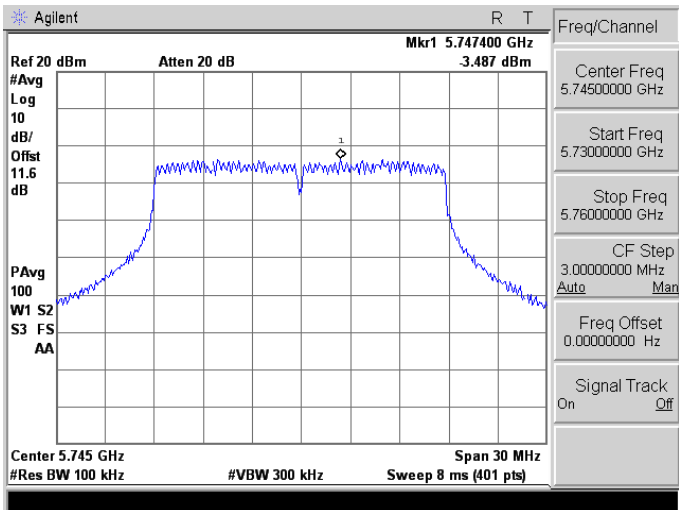
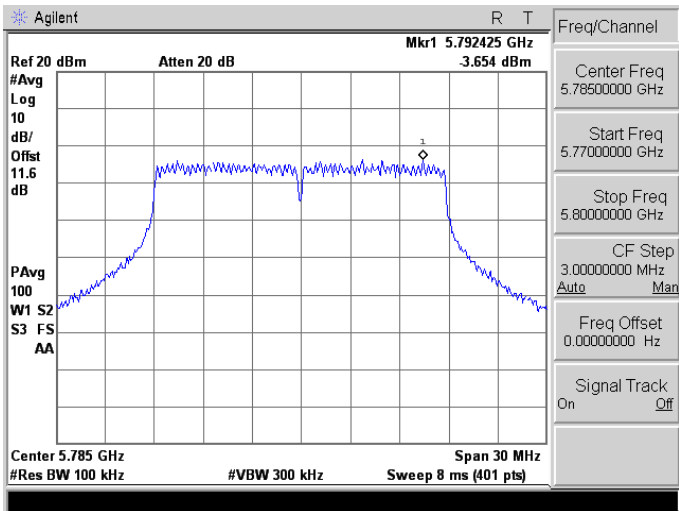
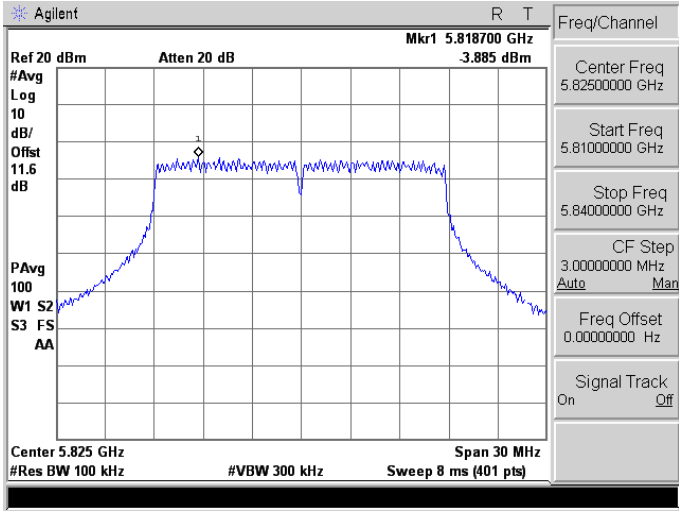


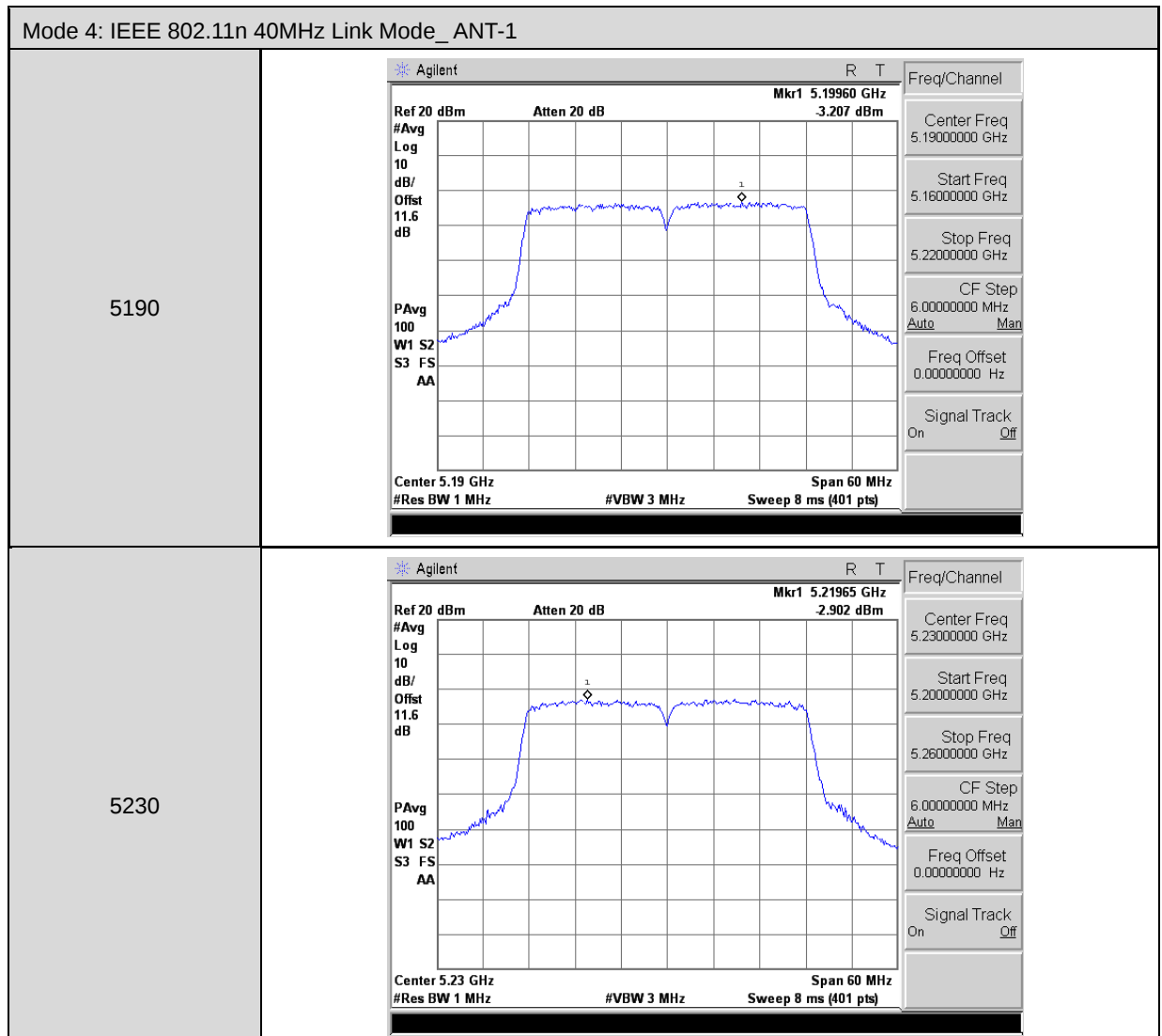


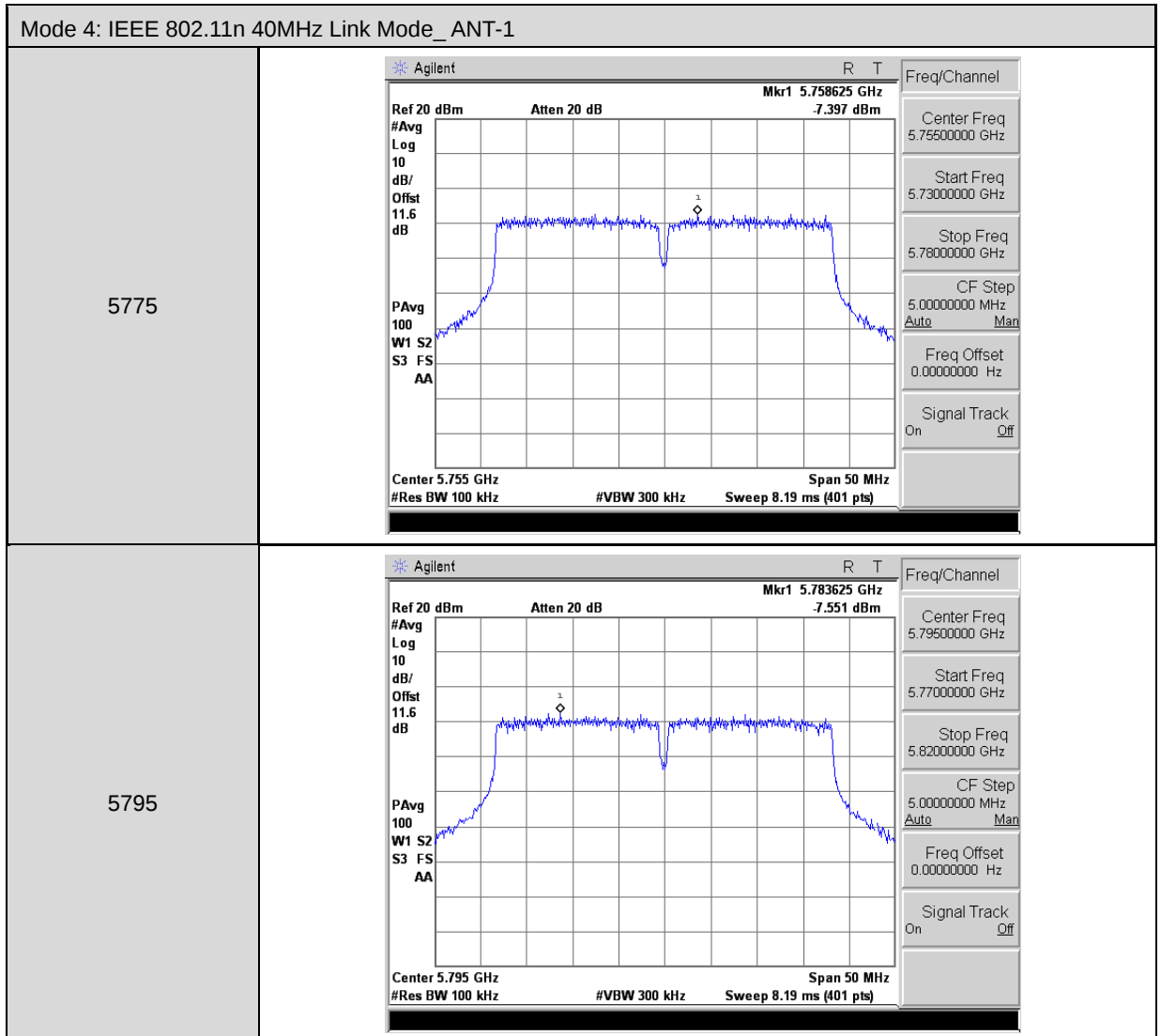
Mode 2: IEEE 802.11a Link Mode_ ANT-1	
5180	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.1873 GHz 4.445 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.18 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.18000000 GHz Start Freq 5.16000000 GHz Stop Freq 5.20000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5200	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.1988 GHz 4.235 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.2 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.20000000 GHz Start Freq 5.18000000 GHz Stop Freq 5.22000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5240	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.2464 GHz 4.328 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.24 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.24000000 GHz Start Freq 5.22000000 GHz Stop Freq 5.26000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

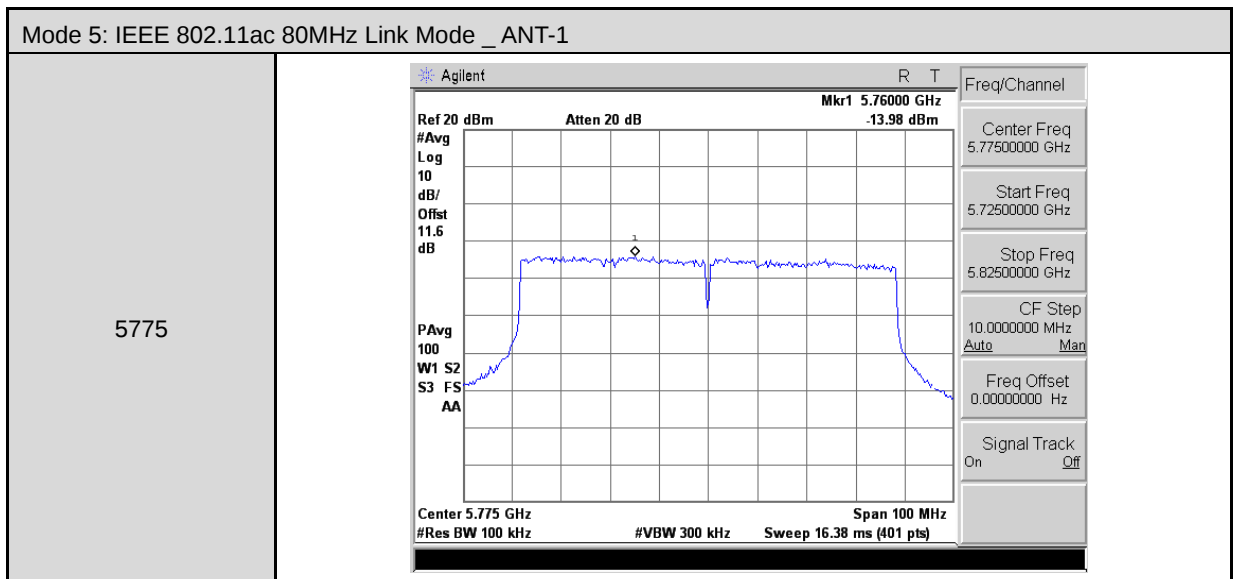
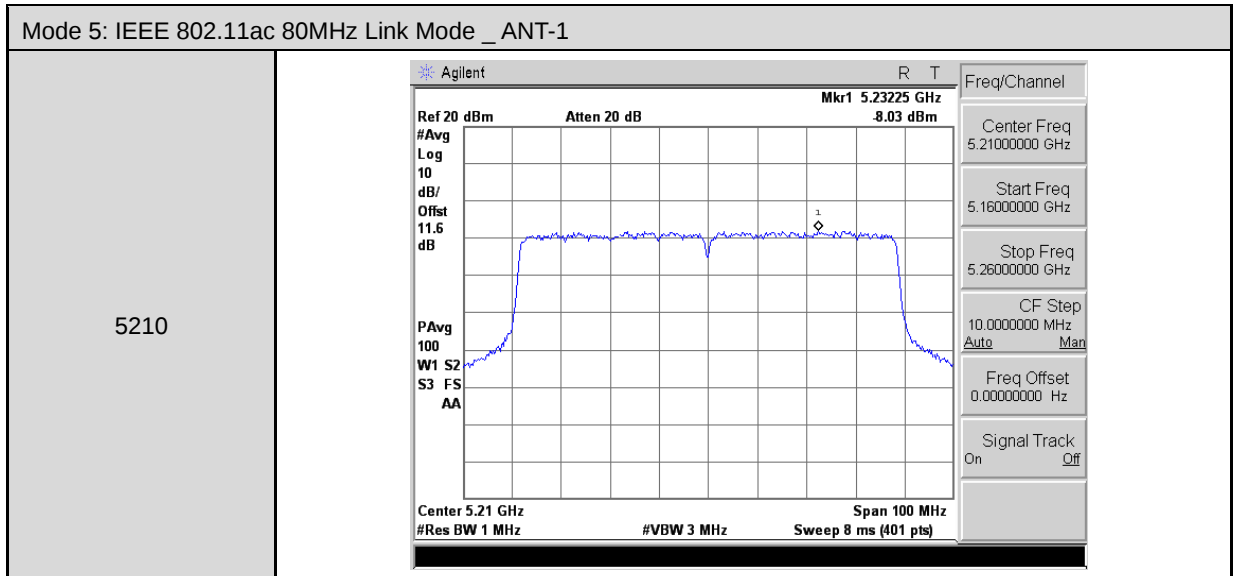
Mode 2: IEEE 802.11a Link Mode_ ANT-1	
5745	
5785	
5825	

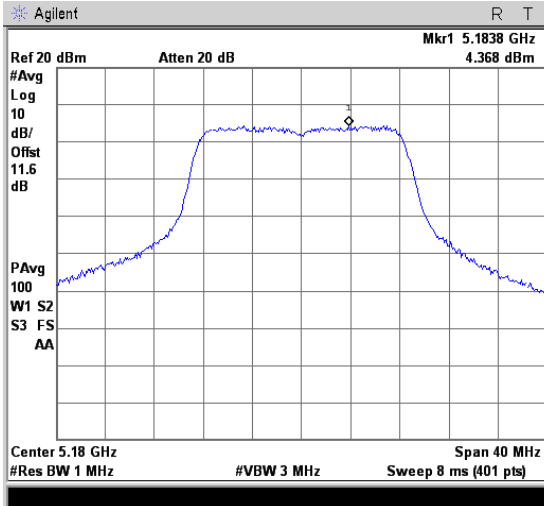
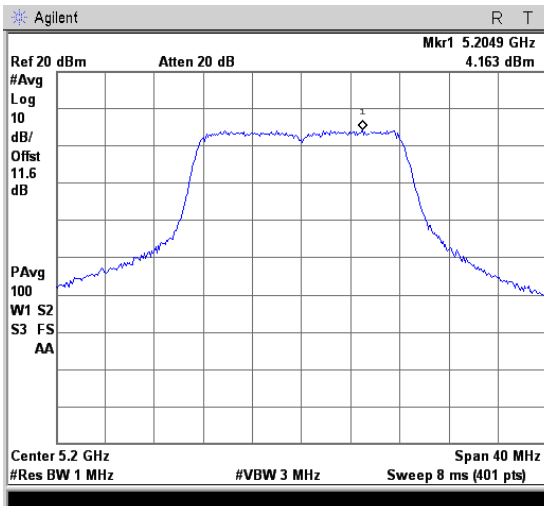
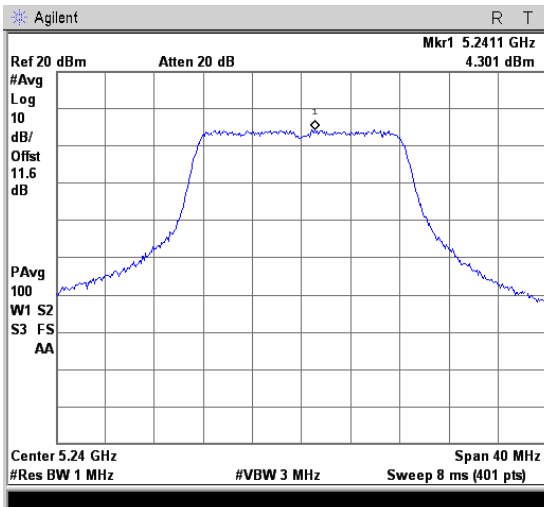
Mode 3: IEEE 802.11n 20MHz Link Mode _ANT-1	
5180	Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.1732 GHz 3.427 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.18 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.18000000 GHz Start Freq 5.16000000 GHz Stop Freq 5.20000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5200	Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.1950 GHz 3.426 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.2 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.20000000 GHz Start Freq 5.18000000 GHz Stop Freq 5.22000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5220	Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.2361 GHz 3.679 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.24 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.24000000 GHz Start Freq 5.22000000 GHz Stop Freq 5.26000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

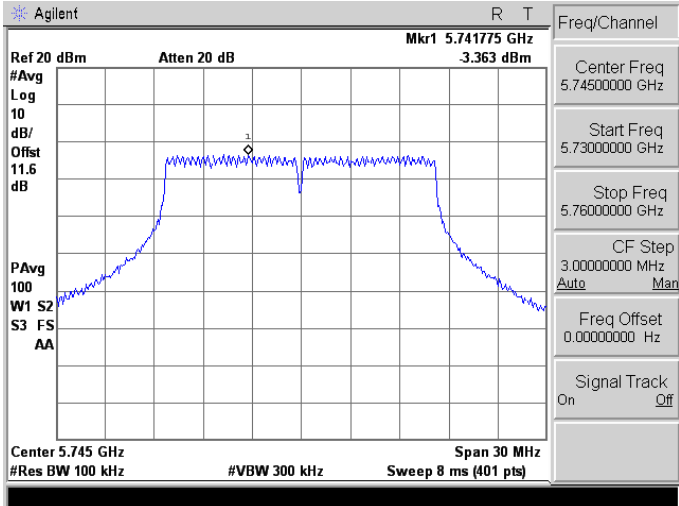
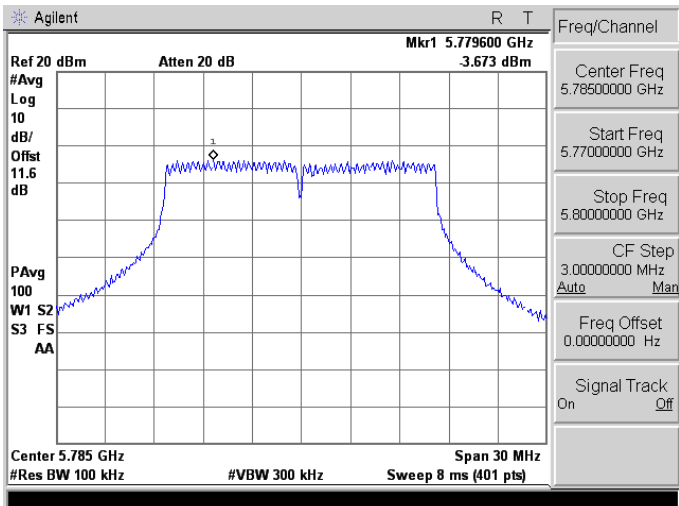
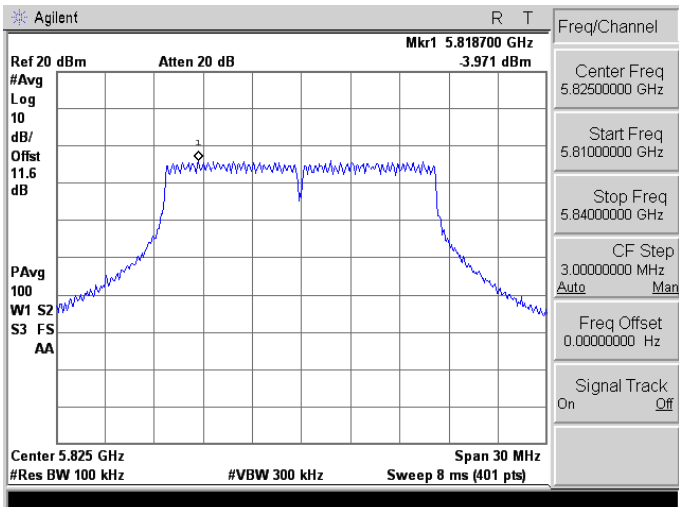
Mode 3: IEEE 802.11n 20MHz Link Mode _ANT-1	
5745	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.747400 GHz -3.487 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.745 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.74500000 GHz Start Freq 5.73000000 GHz Stop Freq 5.76000000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5785	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.792425 GHz -3.654 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.785 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.78500000 GHz Start Freq 5.77000000 GHz Stop Freq 5.80000000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5825	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.818700 GHz -3.885 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.825 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.82500000 GHz Start Freq 5.81000000 GHz Stop Freq 5.84000000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

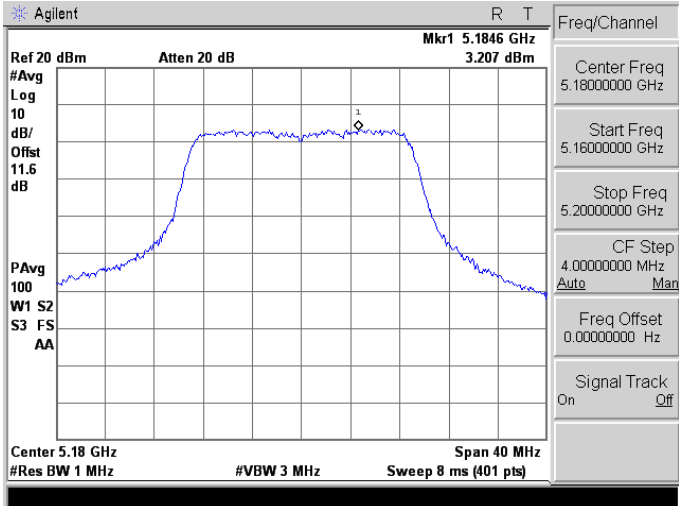
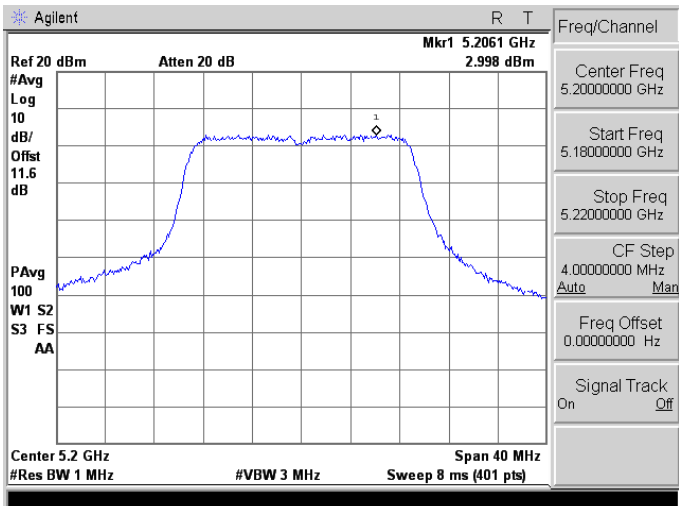
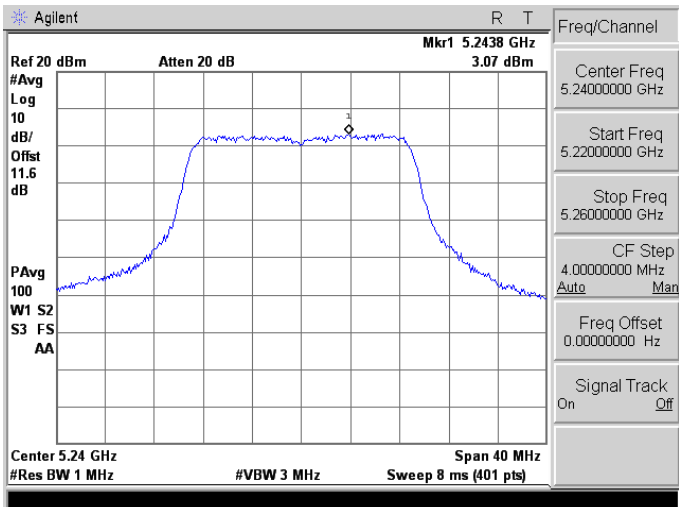


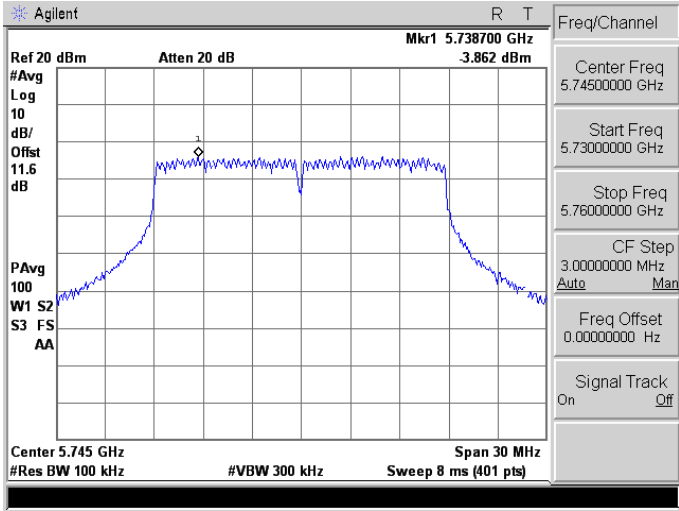
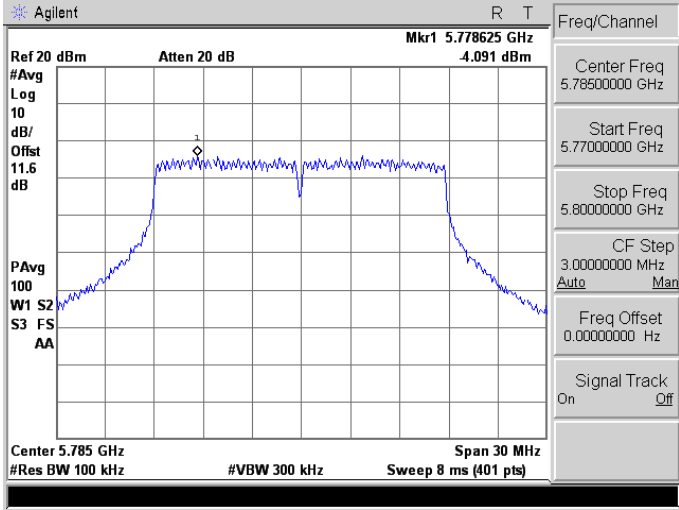
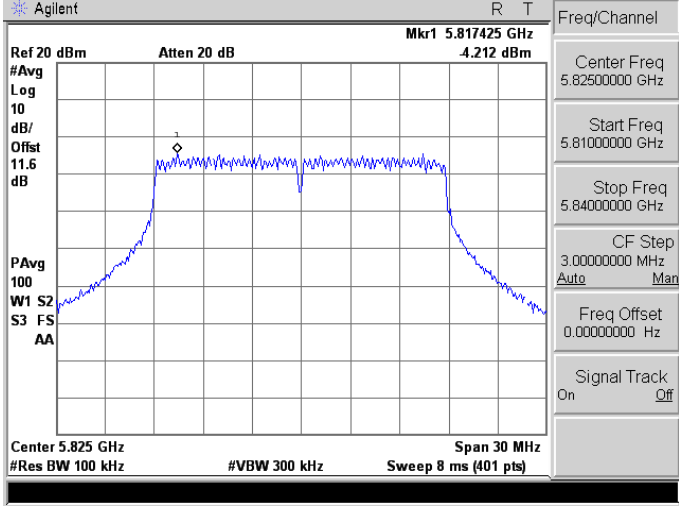


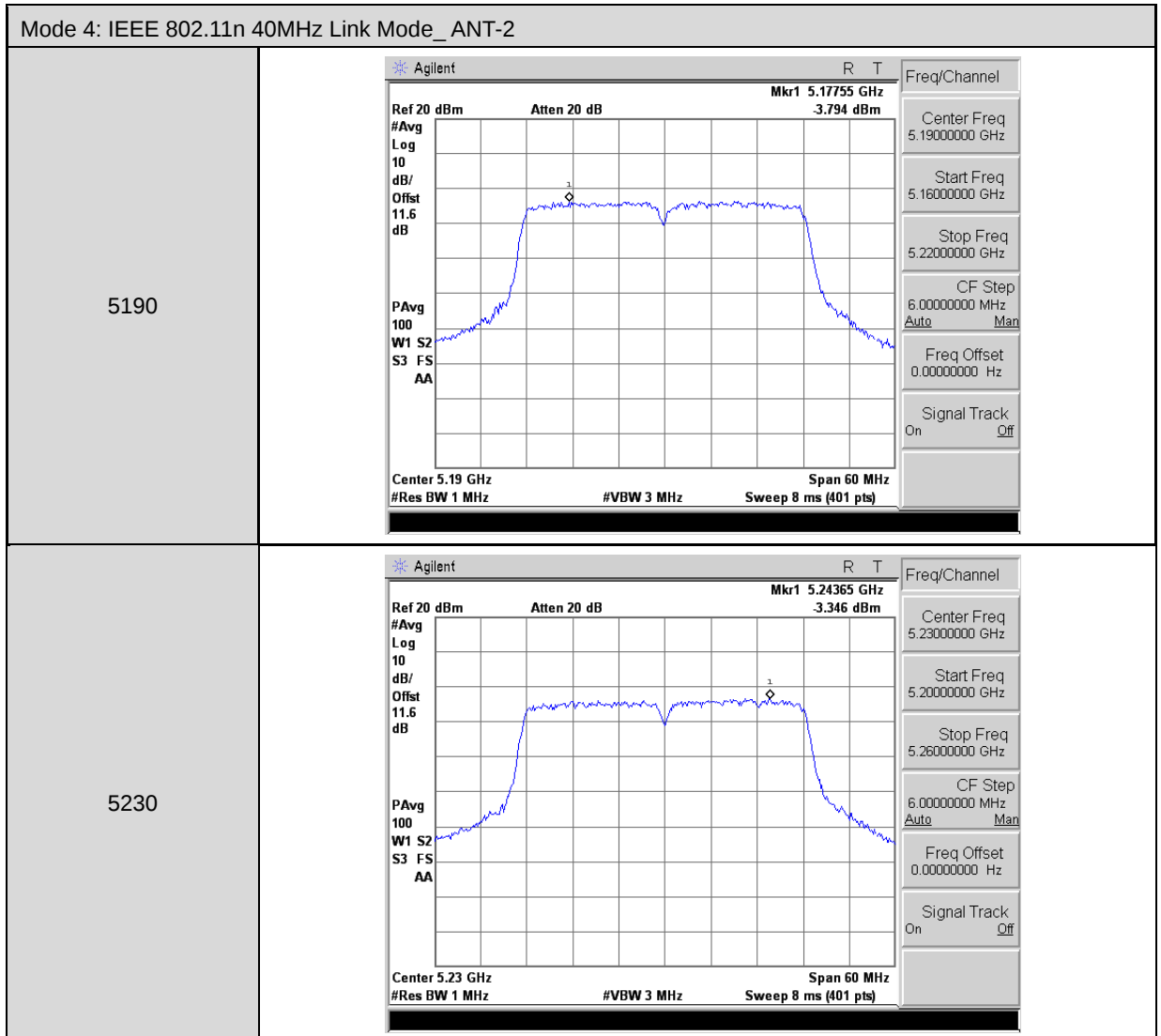


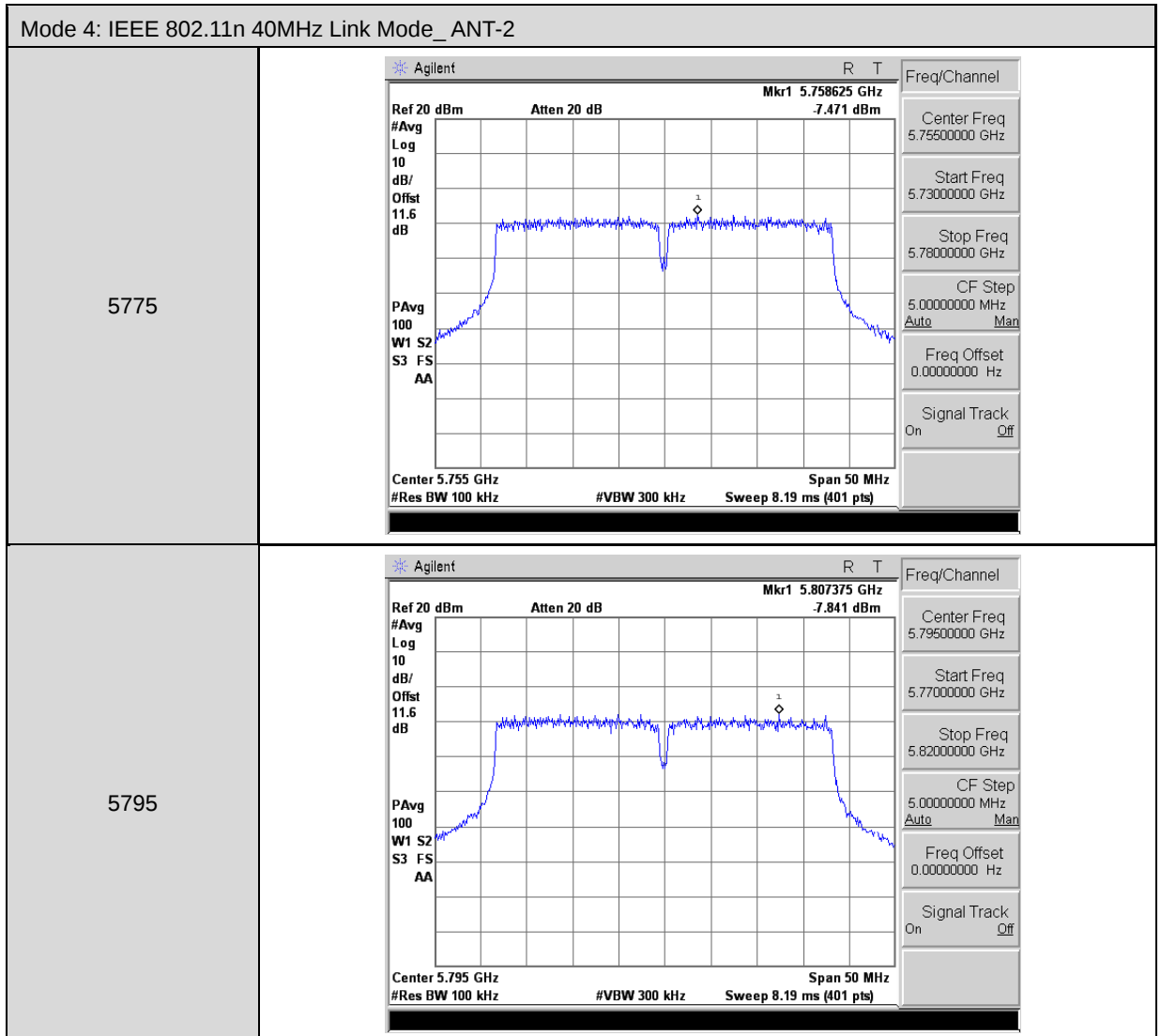
Mode 2: IEEE 802.11a Link Mode_ ANT-2	
5180	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.1838 GHz 4.368 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.18 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.18000000 GHz Start Freq 5.16000000 GHz Stop Freq 5.20000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5200	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.2049 GHz 4.163 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.2 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.20000000 GHz Start Freq 5.18000000 GHz Stop Freq 5.22000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5240	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.2411 GHz 4.301 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.24 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.24000000 GHz Start Freq 5.22000000 GHz Stop Freq 5.26000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

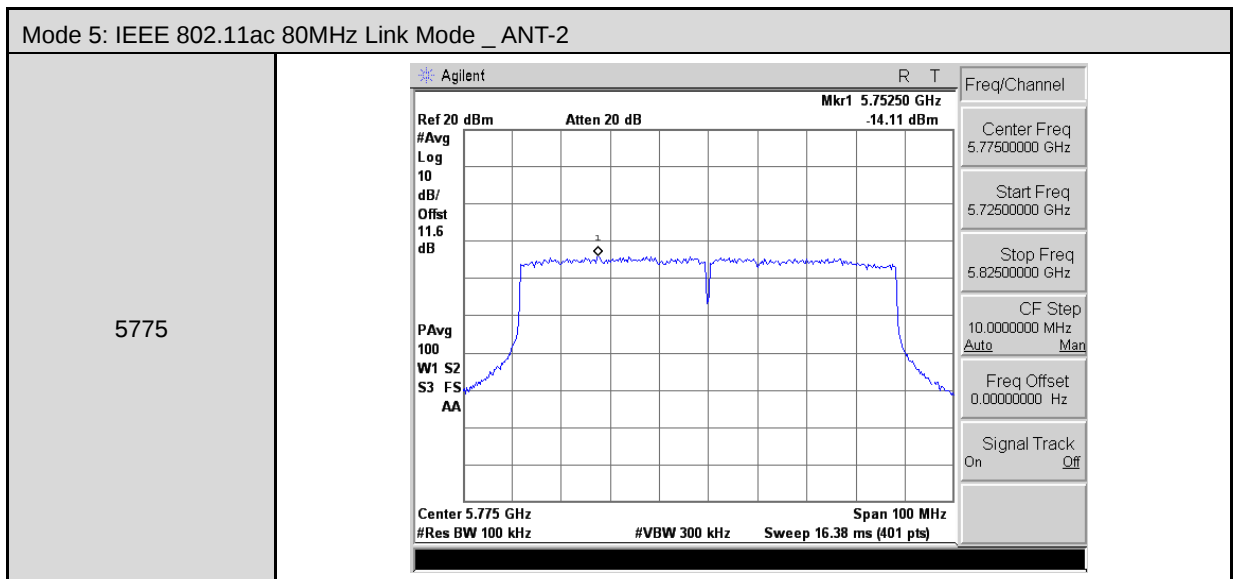
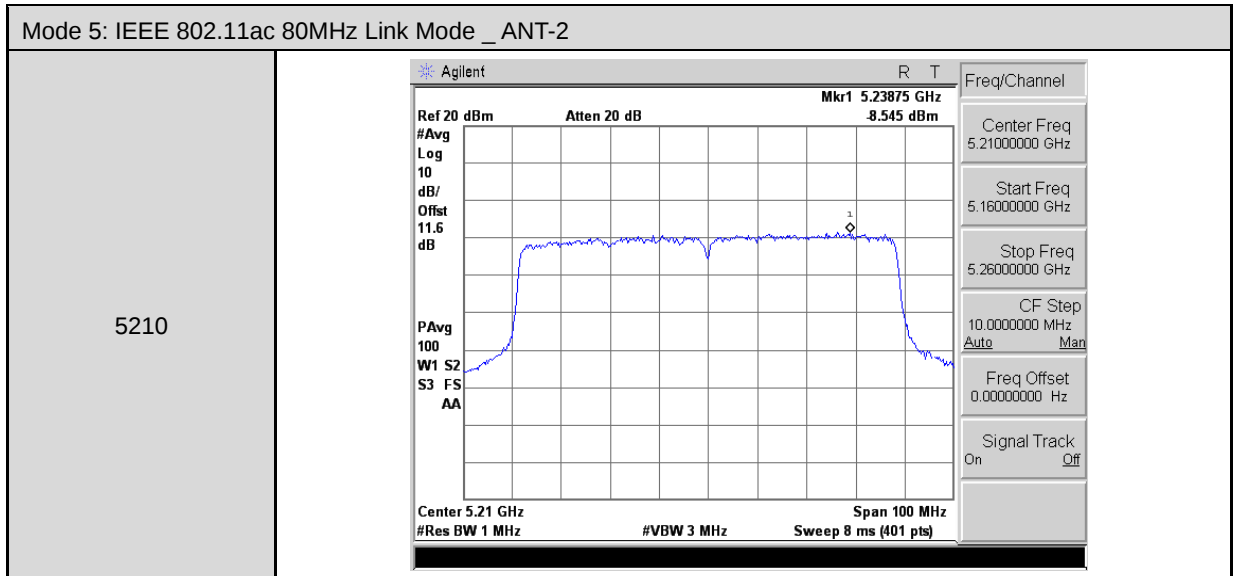
Mode 2: IEEE 802.11a Link Mode_ ANT-2	
5745	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.741775 GHz -3.363 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.745 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.74500000 GHz Start Freq 5.73000000 GHz Stop Freq 5.76000000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5785	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.779600 GHz -3.673 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.785 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.78500000 GHz Start Freq 5.77000000 GHz Stop Freq 5.80000000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5825	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.818700 GHz -3.971 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.825 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.82500000 GHz Start Freq 5.81000000 GHz Stop Freq 5.84000000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 3: IEEE 802.11n 20MHz Link Mode _ANT-2	
5180	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.1846 GHz 3.207 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.18 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.18000000 GHz Start Freq 5.16000000 GHz Stop Freq 5.20000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5200	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.2061 GHz 2.998 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.2 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.20000000 GHz Start Freq 5.18000000 GHz Stop Freq 5.22000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5220	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.2438 GHz 3.07 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.24 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.24000000 GHz Start Freq 5.22000000 GHz Stop Freq 5.26000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 3: IEEE 802.11n 20MHz Link Mode _ANT-2	
5745	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.738700 GHz -3.862 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.745 GHz #Res BW 100 kHz Span 30 MHz Sweep 8 ms (401 pts) #VBW 300 kHz Freq/Channel Center Freq 5.74500000 GHz Start Freq 5.73000000 GHz Stop Freq 5.76000000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5785	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.778625 GHz -4.091 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.785 GHz #Res BW 100 kHz Span 30 MHz Sweep 8 ms (401 pts) #VBW 300 kHz Freq/Channel Center Freq 5.78500000 GHz Start Freq 5.77000000 GHz Stop Freq 5.80000000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5825	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.817425 GHz -4.212 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.825 GHz #Res BW 100 kHz Span 30 MHz Sweep 8 ms (401 pts) #VBW 300 kHz Freq/Channel Center Freq 5.82500000 GHz Start Freq 5.81000000 GHz Stop Freq 5.84000000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off





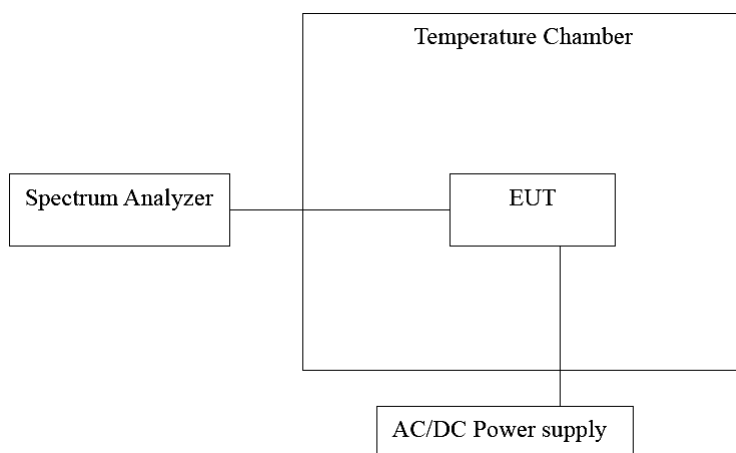


10 Frequency Stability Measurement

10.1. Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

10.2. Test Setup



10.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4408B	MY45107753	07/27/2015	(1)
Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	04/27/2015	(1)
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

Note: N.C.R. = No Calibration Request.

10.4. Test Procedure

1. The EUT was placed inside the environmental test chamber and powered by nominal AC/DC voltage.
2. Turn the EUT on and couple its output to a spectrum analyzer.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize.
5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
6. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

10.5. Test Result

Model Number	UAP-AC-PRO				
Test Mode	Mode 2				
Frequency	5200 MHz				
Date of Test	08/25/2015			Test Site	TE02
Temp. (°C)	Voltage (Vac)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
-10	120	5199.9433	-56700	-10.904	Pass
0		5199.9547	-45300	-8.712	Pass
10		5199.9642	-35800	-6.885	Pass
20		5200.0000	0	0.000	Pass
30		5200.0090	9000	1.731	Pass
40		5200.0202	20200	3.885	Pass
50		5200.025	25000	4.808	Pass
60		5200.0347	34700	6.673	Pass
70		5200.01569	15690	3.017	Pass

Model Number	UAP-AC-PRO				
Test Mode	Mode 2				
Frequency	5200 MHz				
Date of Test	08/25/2015			Test Site	TE02
Temp. (°C)	Voltage (Vac)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
20	138	5199.9872	-12800	-2.462	Pass
	120	5199.9997	-300	-0.058	Pass
	102	5199.9945	-5500	-1.058	Pass

Note: The manufacturer's frequency stability specification is better than 30ppm.

Model Number	UAP-AC-PRO				
Test Mode	Mode 2				
Frequency	5785 MHz				
Date of Test	08/25/2015			Test Site	TE02
Temp. (°C)	Voltage (Vac)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
-10	120	5785.0108	10800	1.867	Pass
0		5785.0240	24000	4.149	Pass
10		5785.0290	29000	5.013	Pass
20		5785.0461	46100	7.969	Pass
30		5785.0506	50600	8.747	Pass
40		5785.0739	73900	12.774	Pass
50		5785.0737	73700	12.740	Pass
60		5785.0061	6100	1.054	Pass
70		5785.0023	2300	0.398	Pass

Model Number	UAP-AC-PRO				
Test Mode	Mode 2				
Frequency	5785 MHz				
Date of Test	08/25/2015			Test Site	TE02
Temp. (°C)	Voltage (Vac)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
20	138	5785.0088	8800	1.521	Pass
	120	5785.0297	29700	5.134	Pass
	102	5785.0415	41500	7.174	Pass

Note: The manufacturer's frequency stability specification is better than 30ppm.

Model Number	UAP-AC-PRO				
Test Mode	Mode 3				
Frequency	5200 MHz				
Date of Test	08/25/2015			Test Site	TE02
Temp. (°C)	Voltage (Vac)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
-10	120	5199.9527	-47300	-9.096	Pass
0		5199.9522	-47800	-9.192	Pass
10		5199.9761	-23900	-4.596	Pass
20		5199.9802	-19800	-3.808	Pass
30		5199.9840	-16000	-3.077	Pass
40		5200.0069	6900	1.327	Pass
50		5200.0031	3100	0.596	Pass
60		5200.0224	22400	4.308	Pass
70		5200.0314	31400	6.038	Pass

Model Number	UAP-AC-PRO				
Test Mode	Mode 3				
Frequency	5200 MHz				
Date of Test	08/25/2015			Test Site	TE02
Temp. (°C)	Voltage (Vac)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
20	138	5199.9707	-29300	-5.635	Pass
	120	5199.9870	-13000	-2.500	Pass
	102	5199.9876	-12400	-2.385	Pass

Note: The manufacturer's frequency stability specification is better than 30ppm.

Model Number	UAP-AC-PRO				
Test Mode	Mode 3				
Frequency	5785 MHz				
Date of Test	08/25/2015			Test Site	TE02
Temp. (°C)	Voltage (Vac)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
-10	120	5784.9998	-200	-0.035	Pass
0		5784.9947	-5300	-0.916	Pass
10		5785.0135	13500	2.334	Pass
20		5785.0215	21500	3.717	Pass
30		5785.0220	22000	3.803	Pass
40		5785.0327	32700	5.653	Pass
50		5785.0501	50100	8.660	Pass
60		5785.0665	66500	11.495	Pass
70		5785.0589	58900	10.182	Pass

Model Number	UAP-AC-PRO				
Test Mode	Mode 2				
Frequency	5785 MHz				
Date of Test	08/25/2015			Test Site	TE02
Temp. (°C)	Voltage (Vac)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
20	138	5785.0249	24900	4.304	Pass
	120	5785.0326	32600	5.635	Pass
	102	5785.0315	31500	5.445	Pass

Note: The manufacturer's frequency stability specification is better than 30ppm.

Model Number	UAP-AC-PRO				
Test Mode	Mode 4				
Frequency	5230 MHz				
Date of Test	08/25/2015			Test Site	TE02
Temp. (°C)	Voltage (Vac)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
-10	120	5230.0197	19700	3.767	Pass
0		5230.0201	20100	3.843	Pass
10		5230.0409	40900	7.820	Pass
20		5230.0408	40800	7.801	Pass
30		5230.0514	51400	9.828	Pass
40		5230.0694	69400	13.270	Pass
50		5230.0795	79500	15.201	Pass
60		5230.1007	100700	19.254	Pass
70		5230.0902	90200	17.247	Pass

Model Number	UAP-AC-PRO				
Test Mode	Mode 4				
Frequency	5230 MHz				
Date of Test	08/25/2015			Test Site	TE02
Temp. (°C)	Voltage (Vac)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
20	138	5230.0559	55900	10.688	Pass
	120	5230.0617	61700	11.797	Pass
	102	5230.0693	69300	13.250	Pass

Note: The manufacturer's frequency stability specification is better than 30ppm.

Model Number	UAP-AC-PRO				
Test Mode	Mode 4				
Frequency	5795 MHz				
Date of Test	08/25/2015			Test Site	TE02
Temp. (°C)	Voltage (Vac)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
-10	120	5794.8940	-106000	-18.292	Pass
0		5794.9084	-91600	-15.807	Pass
10		5794.8975	-102500	-17.688	Pass
20		5794.9380	-62000	-10.699	Pass
30		5794.9306	-69400	-11.976	Pass
40		5794.9577	-42300	-7.299	Pass
50		5794.9701	-29900	-5.160	Pass
60		5794.9682	-31800	-5.487	Pass
70		5794.9160	-84000	-14.495	Pass

Model Number	UAP-AC-PRO				
Test Mode	Mode 4				
Frequency	5795 MHz				
Date of Test	08/25/2015			Test Site	TE02
Temp. (°C)	Voltage (Vac)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
20	138	5794.9040	-96000	-16.566	Pass
	120	5794.9159	-84100	-14.513	Pass
	102	5794.9193	-80700	-13.926	Pass

Note: The manufacturer's frequency stability specification is better than 30ppm.

Model Number	UAP-AC-PRO				
Test Mode	Mode 5				
Frequency	5210 MHz				
Date of Test	08/25/2015			Test Site	TE02
Temp. (°C)	Voltage (Vac)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
-10	120	5209.9532	-46800	-8.983	Pass
0		5209.9698	-30200	-5.797	Pass
10		5209.9714	-28600	-5.489	Pass
20		5209.9808	-19200	-3.685	Pass
30		5209.9990	-1000	-0.192	Pass
40		5210.0037	3700	0.710	Pass
50		5210.0139	13900	2.668	Pass
60		5210.0315	31500	6.046	Pass
70		5210.0274	27400	5.259	Pass

Model Number	UAP-AC-PRO				
Test Mode	Mode 5				
Frequency	5210 MHz				
Date of Test	08/26/2015			Test Site	TE02
Temp. (°C)	Voltage (Vac)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
20	138	5209.9656	-34400	-6.603	Pass
	120	5209.9706	-29400	-5.643	Pass
	102	5209.9822	-17800	-3.417	Pass

Note: The manufacturer's frequency stability specification is better than 30ppm.

Model Number	UAP-AC-PRO				
Test Mode	Mode 5				
Frequency	5775 MHz				
Date of Test	08/25/2015			Test Site	TE02
Temp. (°C)	Voltage (Vac)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
-10	120	5774.9604	-39600	-6.857	Pass
0		5774.9708	-29200	-5.056	Pass
10		5774.9787	-21300	-3.688	Pass
20		5774.9866	-13400	-2.320	Pass
30		5774.9980	-2000	-0.346	Pass
40		5775.0062	6200	1.074	Pass
50		5775.0170	17000	2.944	Pass
60		5775.0345	34500	5.974	Pass
70		5775.0296	29600	5.126	Pass

Model Number	UAP-AC-PRO				
Test Mode	Mode 5				
Frequency	5775 MHz				
Date of Test	08/25/2015			Test Site	TE02
Temp. (°C)	Voltage (Vac)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
20	138	5774.9804	-19600	-3.394	Pass
	120	5774.9934	-6600	-1.143	Pass
	102	5775.0005	500	0.087	Pass

Note: The manufacturer's frequency stability specification is better than 30ppm.

11 Antenna Requirement

11.1. Limit

For intentional device, according to 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.

And According to 15.407 (a), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2. Antenna Connector Construction

The antenna used in this product is Dual-Band Antennas. And the maximum Gain of this antenna is only 3 dBi.