

FCC 47 CFR PART 15 SUBPART E

Applicant : Ubiquiti Networks, Inc.
Address : 2580 Orchard Parkway, San Jose, California, United States, 95131
Product Type : Access Point
Trade Name : UBIQUITI
Model Number : UAP-AC-PRO
Applicable Standard : FCC 47 CFR PART 15 SUBPART E
ANSI C63.10:2013
Receive Date : Apr. 08, 2015
Test Period : Jul. 09 ~ Aug. 26, 2015
Issue Date : Mar. 08, 2016

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	Nov. 04, 2015	Initial Issue	
01	Mar. 08, 2016	Revised report information.	Peggy Chang

Verification of Compliance

Issued Date: 03/08/2016

Applicant : Ubiquiti Networks, Inc.
Address : 2580 Orchard Parkway, San Jose, California, United States, 95131
Product Type : Access Point
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
ANSI C63.10:2013
Test Result : Complied
Application Purpose : Class II permissive change
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 : Fly Lu
(Manager) (Fly Lu)

Reviewed By : Eric Ou Yang
(Testing Engineer) (Eric Ou Yang)

TABLE OF CONTENTS

1	General Information.....	5
1.1.	Summary of Test Result	5
1.2.	Measurement Uncertainty	5
2	EUT Description.....	6
3	Test Methodology	8
3.1.	Mode of Operation	8
3.2.	EUT Exercise Software	12
3.3.	Configuration of Test System Details	13
3.4.	Test Site Environment	13
4	Test Results	14
4.1.	Transmitter Radiated Emissions Measurement.....	14
4.2.	Maximum Conducted Output Power Measurement	36
4.3.	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement	40
4.4.	Peak Power Spectral Density Measurement	64
4.5.	Frequency Stability Measurement	88
4.6.	Test Procedure	88
4.7.	Antenna Requirement	90
4.8.	Directional Gain Calculated.....	90

1 General Information

1.1. Summary of Test Result

Standard	Item	Result	Remark
15.407(b)(6) 15.207	AC Power Conducted Emission	N/A	---
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

Test Item	Frequency Range	Uncertainty (dB)
Conducted Emission	9kHz ~ 150KHz	2.7
	150kHz ~ 30MHz	2.8
Radiated Emission	30MHz ~ 1000MHz	6.300
	1000MHz ~ 18000MHz	5.474
	18000MHz ~ 26500MHz	5.630
	26500MHz ~ 40000MHz	5.054

2 EUT Description

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			
Product Type	Access Point			
Trade Name	UBQUITI			
Model Number	UAP-AC-PRO			
FCC ID	SWX-UAPACPRO			
Class II Permissive Change	Add U-NII Band II function by software control. The change reference Class II Permissive Change Letter in detail.			
Operate Frequency	Frequency Band		Frequency Range (MHz)	Number of Channels
	IEEE 802.11a	U-NII Band II-A	5260 – 5320	4
		U-NII Band II-C	5500 – 5700	11
	IEEE 802.11n 5GHz 20 MHz	U-NII Band II-A	5260 – 5320	4
		U-NII Band II-C	5500 – 5700	11
	IEEE 802.11n 5GHz 40 MHz	U-NII Band II-A	5270 – 5310	2
		U-NII Band II-C	5510 – 5670	5
	IEEE 802.11ac 80 MHz	U-NII Band II-A	5290	1
		U-NII Band II-C	5530 – 5610	2
Modulation Type	OFDM			
Equipment Type	Master (with Radar detection)			
Antenna Type	Dual-Band Antennas			
Antenna Gain	3 dBi			
Antenna Delivery	3TX + 3RX			
Frequency Stability Specification	± 30ppm			
Operate Temp. Range	-10 ~ 70 °C			

Frequency Band		RF Output Power (W)
IEEE 802.11a	U-NII Band II-A	0.148
	U-NII Band II-C	0.186
IEEE 802.11n 5GHz 20 MHz	U-NII Band II-A	0.184
	U-NII Band II-C	0.187
IEEE 802.11n 5GHz 40 MHz	U-NII Band II-A	0.061
	U-NII Band II-C	0.158
IEEE 802.11ac 80 MHz	U-NII Band II-A	0.068
	U-NII Band II-C	0.088

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 5GHz 20MHz link mode
Mode 4: IEEE 802.11n 5GHz 40MHz link mode
Mode 5: IEEE 802.11ac 80MHz Link Mode

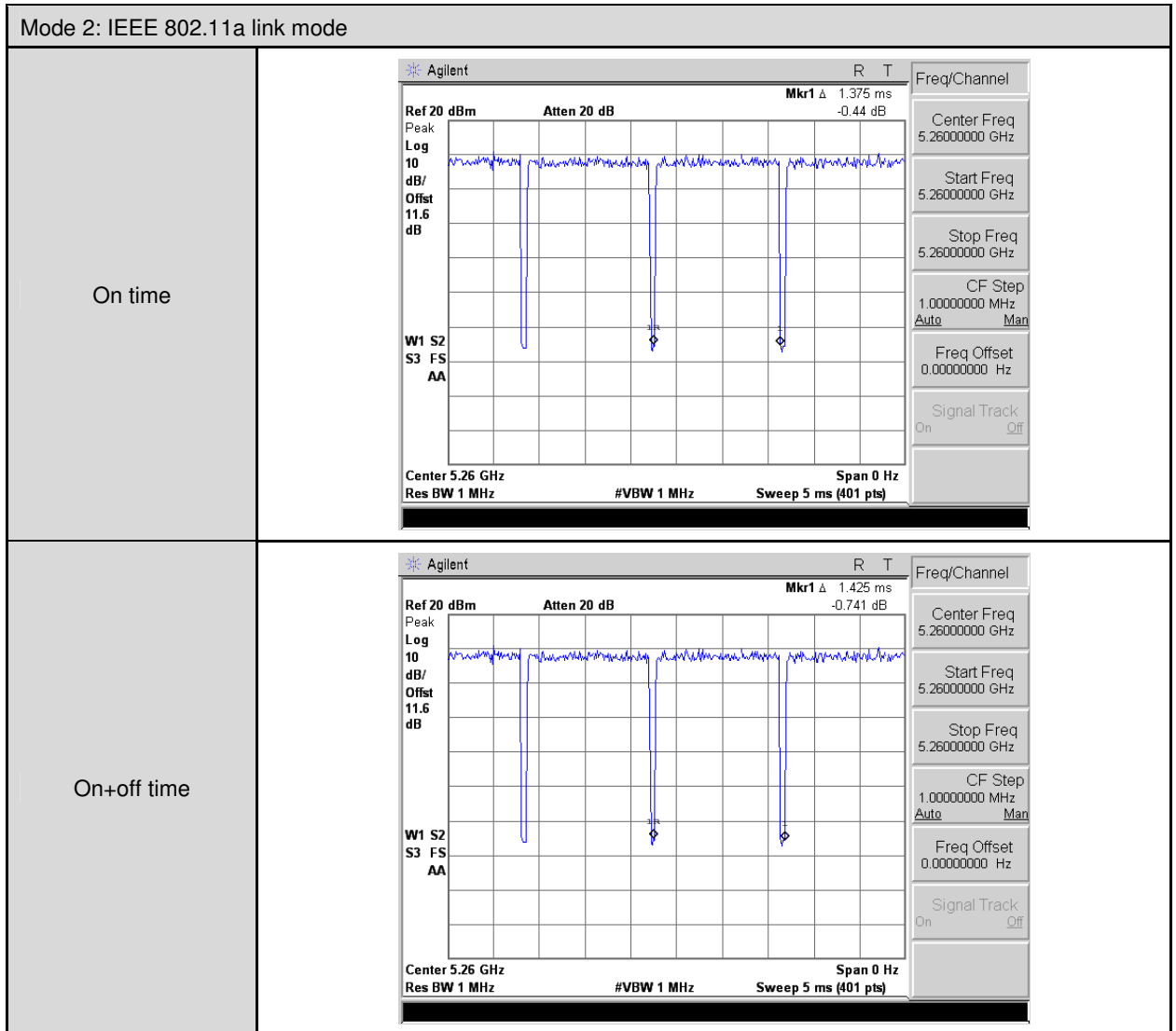
Software used to control the EUT for staying in continuous transmitting mode was programmed.

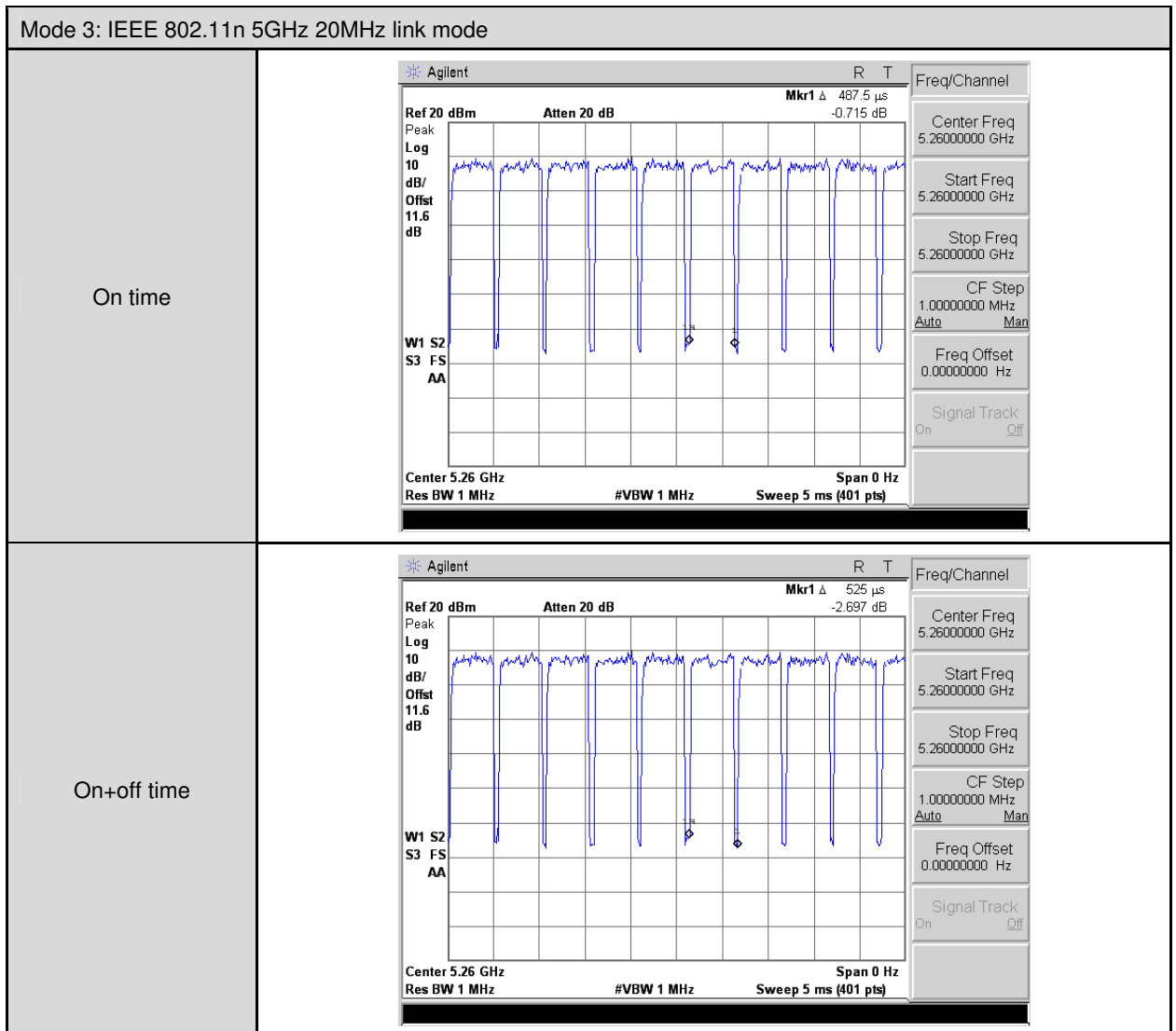
After verification, all tests were carried out with the worst case test modes as shown below except radiated spurious emission below 1GHz and power line conducted emissions below 30MHz, which worst case was in normal link mode only.

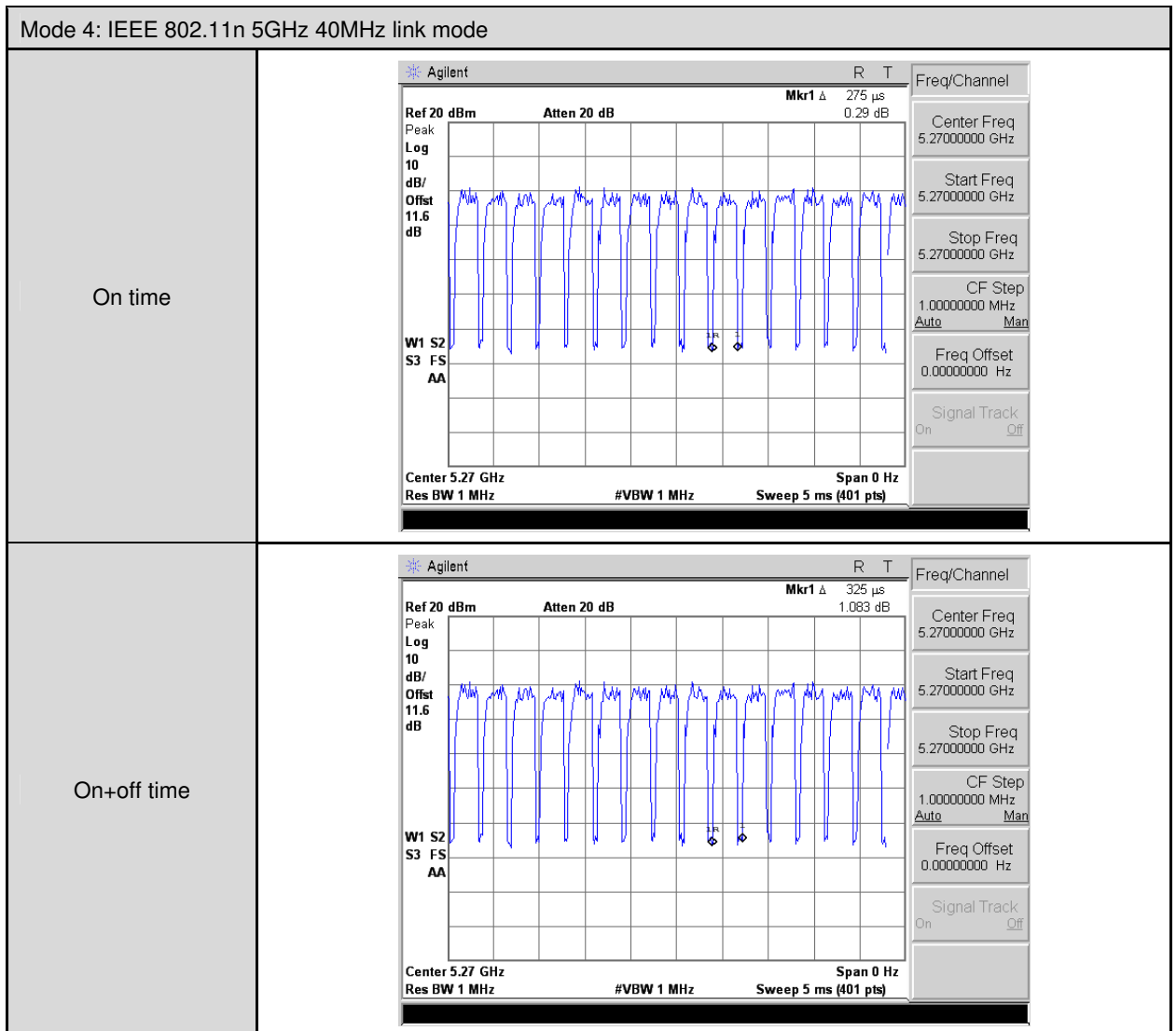
Test Mode	Band	Data Rate	Test Channel
Mode 2	U-NII Band II-A	6M	52, 56, 64
	U-NII Band II-C		100, 112, 140
Mode 3	U-NII Band II-A	19.5M	52, 56, 64
	U-NII Band II-C		100, 112, 140
Mode 4	U-NII Band II-A	40.5M	54, 62
	U-NII Band II-C		102, 110, 134
Mode 5	U-NII Band II-A	87.9M	58
	U-NII Band II-C		106, 122

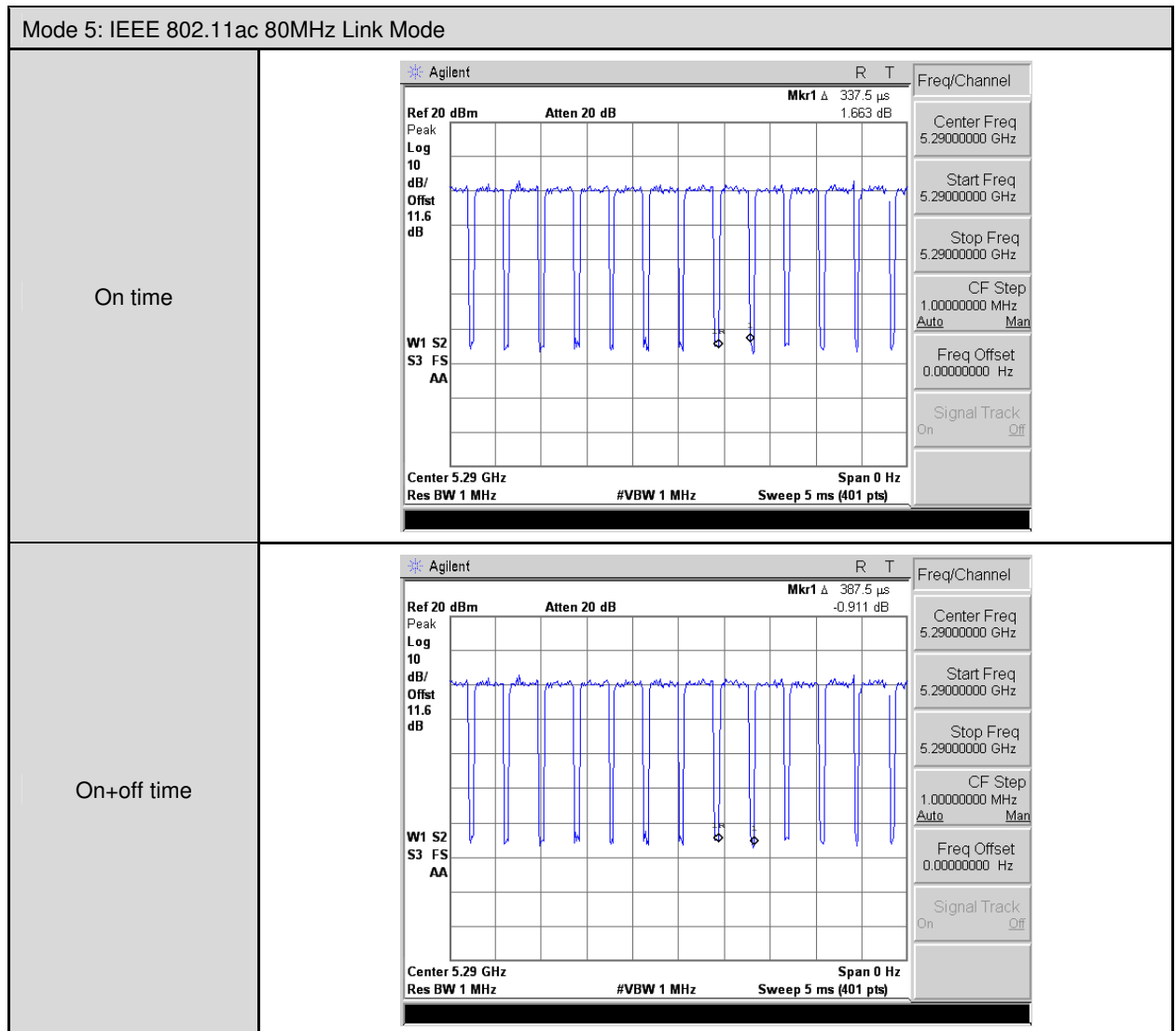
Duty cycle

Test Mode	Frequency (MHz)	on time (ms)	on+off time (ms)	Duty cycle	Duty Factor (dB)	1/T Minimum VBW (kHz)
Mode 2	5260.0	1.375	1.425	0.965	0.155	0.727
Mode 3	5260.0	0.488	0.525	0.929	0.322	2.051
Mode 4	5270.0	0.275	0.325	0.846	0.726	3.636
Mode 5	5290.0	0.338	0.388	0.871	0.600	2.963









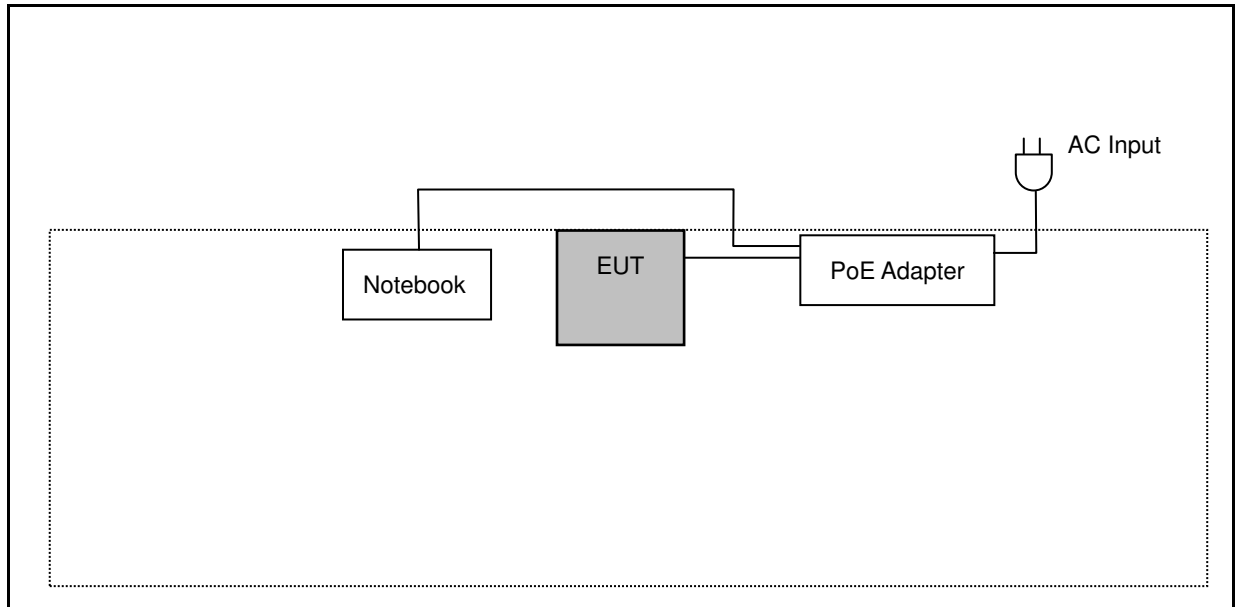
3.2. EUT Exercise Software

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

Radiated Emission



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 Test Results

4.1. Transmitter Radiated Emissions Measurement

■ 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.

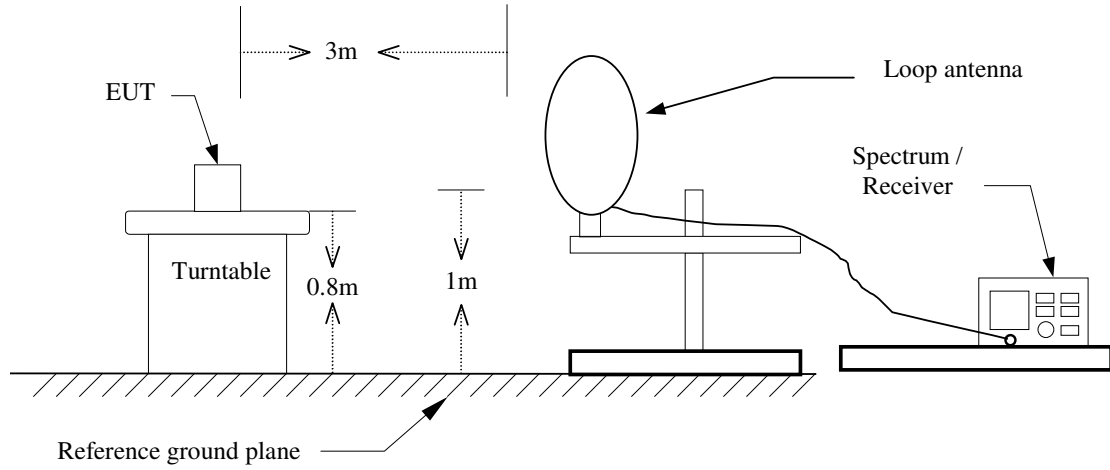
■ Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
RF Pre-selector	Agilent	N9039A	MY46520256	01/06/2015	1 year
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/06/2015	1 year
Pre Amplifier	Agilent	8449B	3008A02237	02/24/2015	1 year
Pre Amplifier	Agilent	8447D	2944A10961	02/24/2015	1 year
Broadband Antenna (30MHz~1GHz)	SCHWARZBECK MESS-ELEKTRON	VULB9163	9163-270	08/11/2015	1 year
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRON	BBHA9120D	9120D-550	06/12/2015	1 year
Horn Antenna (18~40GHz)	SCHWARZBECK MESS-ELEKTRON	BBHA9170	9170-320	07/06/2015	1 year
Loop Antenna	COM-POWER CORPORATION	AL-130	121014	02/02/2015	1 year
Microwave Cable	EMCI	EMC-104-SM-SM-1 4000	140202	02/24/2015	1 year
Microwave Cable	EMCI	EMC104-SM-SM-6 00	140301	02/24/2015	1 year
Test Site	ATL	TE01	888001	08/27/2015	1 year

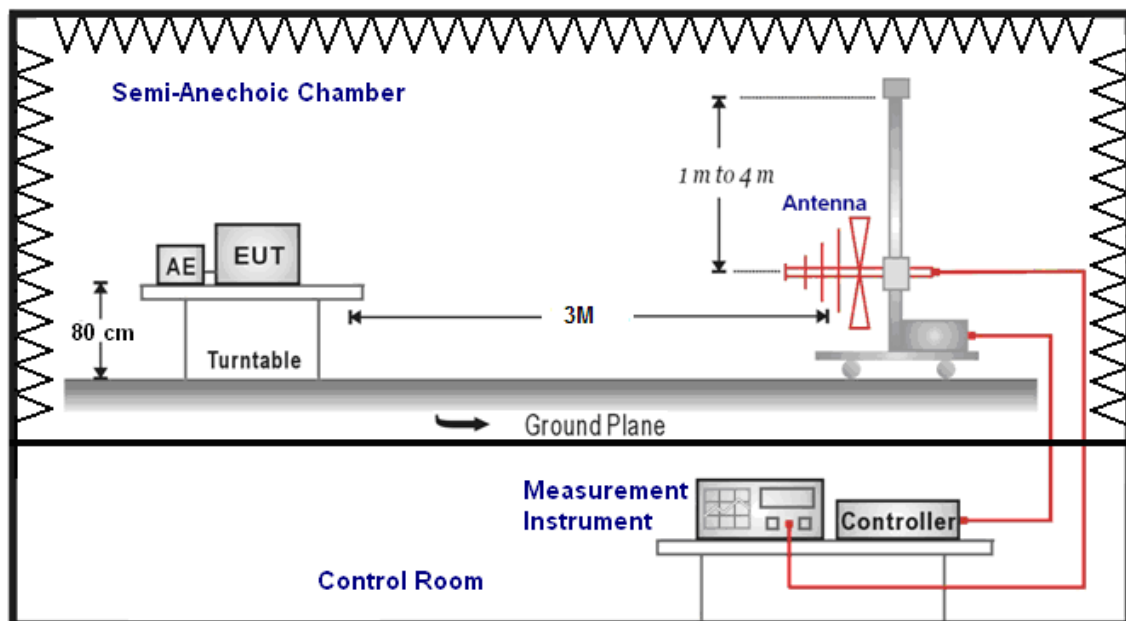
Note: N.C.R. = No Calibration Request.

■ **Setup**

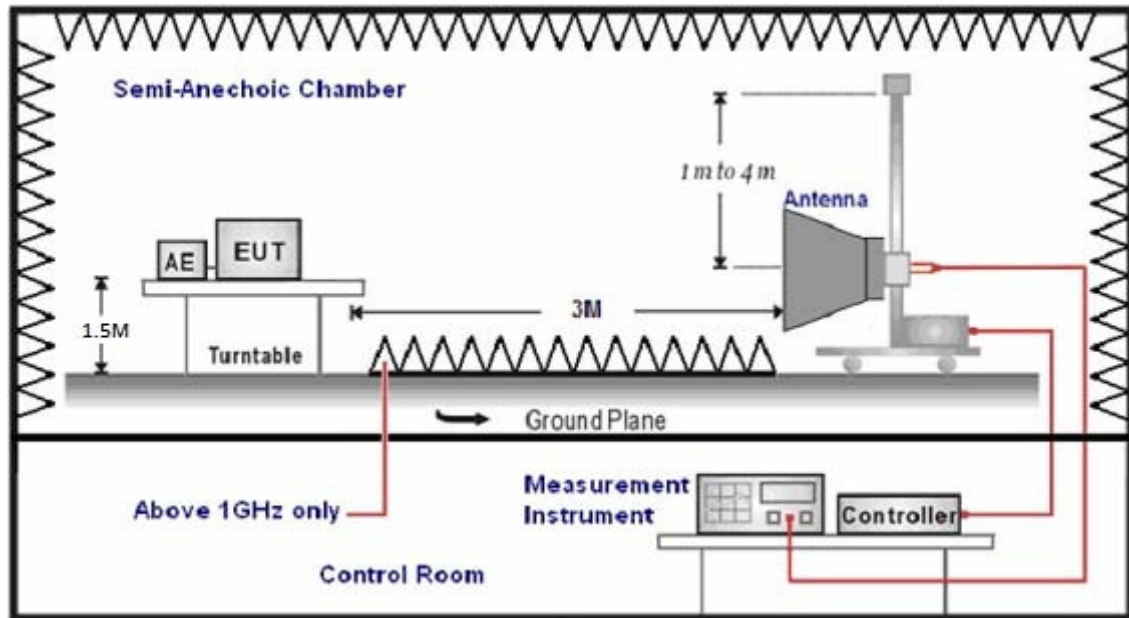
9kHz ~ 30MHz



30MHz ~ 1GHz



Above 1GHz



■ 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 (model 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 3 meter. The antenna at an angle toward the source of the emission. 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

Test Result

Below 1GHz

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Transmitter Radiated Emissions		Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO		Temp.(℃)/Hum.(%RH):		26(℃)/60%RH	
Test Mode:		Mode 1		Date:		07/09/2015	
				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: 1. No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).

2. Result = Correction factor + Reading

3. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

Above 1GHz

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5260MHz			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
2827.000	36.12	5.66	41.78	74.00	-32.22	peak	H
4290.000	33.23	9.35	42.58	74.00	-31.42	peak	H
7629.000	33.53	13.25	46.78	74.00	-27.22	peak	H
2813.000	38.82	5.62	44.44	74.00	-29.56	peak	V
4591.000	34.04	9.90	43.94	74.00	-30.06	peak	V
7650.000	33.33	13.27	46.60	74.00	-27.40	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5280MHz			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
2813.000	36.14	5.62	41.76	74.00	-32.24	peak	H
4570.000	33.23	9.87	43.10	74.00	-30.90	peak	H
7685.000	32.16	13.30	45.46	74.00	-28.54	peak	H
2834.000	36.19	5.67	41.86	74.00	-32.14	peak	V
4570.000	34.01	9.87	43.88	74.00	-30.12	peak	V
7671.000	31.08	13.30	44.38	74.00	-29.62	peak	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5320MHz			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
2827.000	36.83	5.66	42.49	74.00	-31.51	peak	H
4549.000	33.96	9.83	43.79	74.00	-30.21	peak	H
7650.000	33.19	13.27	46.46	74.00	-27.54	peak	H
2806.000	37.02	5.61	42.63	74.00	-31.37	peak	V
4542.000	34.89	9.83	44.72	74.00	-29.28	peak	V
7671.000	33.02	13.30	46.32	74.00	-27.68	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5500MHz			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
2799.000	35.72	5.59	41.31	74.00	-32.69	peak	H
4591.000	32.55	9.90	42.45	74.00	-31.55	peak	H
7643.000	31.74	13.27	45.01	74.00	-28.99	peak	H
2813.000	36.34	5.62	41.96	74.00	-32.04	peak	V
4626.000	33.24	9.95	43.19	74.00	-30.81	peak	V
7629.000	32.48	13.25	45.73	74.00	-28.27	peak	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5560MHz			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
2771.000	37.40	5.51	42.91	74.00	-31.09	peak	H
4605.000	34.37	9.92	44.29	74.00	-29.71	peak	H
7643.000	33.33	13.27	46.60	74.00	-27.40	peak	H
2827.000	36.42	5.66	42.08	74.00	-31.92	peak	V
4591.000	33.35	9.90	43.25	74.00	-30.75	peak	V
7678.000	32.49	13.30	45.79	74.00	-28.21	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5700MHz			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
2827.000	35.94	5.66	41.60	74.00	-32.40	peak	H
4598.000	31.93	9.91	41.84	74.00	-32.16	peak	H
7678.000	31.40	13.30	44.70	74.00	-29.30	peak	H
2806.000	38.02	5.61	43.63	74.00	-30.37	peak	V
4521.000	34.35	9.79	44.14	74.00	-29.86	peak	V
7643.000	34.08	13.27	47.35	74.00	-26.65	peak	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5260MHz			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
2806.000	37.08	5.61	42.69	74.00	-31.31	peak	H
4577.000	34.21	9.87	44.08	74.00	-29.92	peak	H
7629.000	33.20	13.25	46.45	74.00	-27.55	peak	H
2827.000	37.03	5.66	42.69	74.00	-31.31	peak	V
4297.000	33.84	9.37	43.21	74.00	-30.79	peak	V
7657.000	34.12	13.28	47.40	74.00	-26.60	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5280MHz			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
2799.000	35.48	5.59	41.07	74.00	-32.93	peak	H
4563.000	32.72	9.86	42.58	74.00	-31.42	peak	H
7650.000	31.32	13.27	44.59	74.00	-29.41	peak	H
2806.000	37.46	5.61	43.07	74.00	-30.93	peak	V
4311.000	34.32	9.39	43.71	74.00	-30.29	peak	V
7650.000	33.27	13.27	46.54	74.00	-27.46	peak	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5320MHz			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
2813.000	36.51	5.62	42.13	74.00	-31.87	peak	H
4577.000	34.06	9.87	43.93	74.00	-30.07	peak	H
7671.000	33.17	13.30	46.47	74.00	-27.53	peak	H
2834.000	36.11	5.67	41.78	74.00	-32.22	peak	V
4563.000	33.23	9.86	43.09	74.00	-30.91	peak	V
7643.000	32.92	13.27	46.19	74.00	-27.81	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5500MHz			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	37.73	5.67	43.40	74.00	-30.60	peak	H
4577.000	33.08	9.87	42.95	74.00	-31.05	peak	H
7671.000	32.30	13.30	45.60	74.00	-28.40	peak	H
2813.000	36.42	5.62	42.04	74.00	-31.96	peak	V
4577.000	33.75	9.87	43.62	74.00	-30.38	peak	V
7622.000	32.95	13.25	46.20	74.00	-27.80	peak	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5560MHz			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
2806.000	36.28	5.61	41.89	74.00	-32.11	peak	H
4577.000	33.65	9.87	43.52	74.00	-30.48	peak	H
7650.000	32.42	13.27	45.69	74.00	-28.31	peak	H
2834.000	37.42	5.67	43.09	74.00	-30.91	peak	V
4626.000	33.87	9.95	43.82	74.00	-30.18	peak	V
7650.000	34.04	13.27	47.31	74.00	-26.69	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5700MHz			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	36.23	5.67	41.90	74.00	-32.10	peak	H
4563.000	33.65	9.86	43.51	74.00	-30.49	peak	H
7657.000	33.55	13.28	46.83	74.00	-27.17	peak	H
2778.000	36.09	5.54	41.63	74.00	-32.37	peak	V
4661.000	31.94	10.00	41.94	74.00	-32.06	peak	V
7629.000	30.82	13.25	44.07	74.00	-29.93	peak	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5270MHz			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
2806.000	36.61	5.61	42.22	74.00	-31.78	peak	H
4577.000	33.69	9.87	43.56	74.00	-30.44	peak	H
7671.000	32.06	13.30	45.36	74.00	-28.64	peak	H
2806.000	37.09	5.61	42.70	74.00	-31.30	peak	V
4577.000	34.08	9.87	43.95	74.00	-30.05	peak	V
7678.000	32.31	13.30	45.61	74.00	-28.39	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5310MHz			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
2827.000	35.89	5.66	41.55	74.00	-32.45	peak	H
4598.000	32.17	9.91	42.08	74.00	-31.92	peak	H
7650.000	32.28	13.27	45.55	74.00	-28.45	peak	H
2827.000	36.03	5.66	41.69	74.00	-32.31	peak	V
4311.000	34.03	9.39	43.42	74.00	-30.58	peak	V
7629.000	31.72	13.25	44.97	74.00	-29.03	peak	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5510MHz			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
2813.000	37.49	5.62	43.11	74.00	-30.89	peak	H
4570.000	31.72	9.87	41.59	74.00	-32.41	peak	H
7657.000	32.14	13.28	45.42	74.00	-28.58	peak	H
2806.000	35.06	5.61	40.67	74.00	-33.33	peak	V
4563.000	32.31	9.86	42.17	74.00	-31.83	peak	V
7685.000	31.06	13.30	44.36	74.00	-29.64	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5550MHz			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
2813.000	36.04	5.62	41.66	74.00	-32.34	peak	H
4605.000	34.14	9.92	44.06	74.00	-29.94	peak	H
7643.000	33.61	13.27	46.88	74.00	-27.12	peak	H
2827.000	36.80	5.66	42.46	74.00	-31.54	peak	V
4605.000	33.88	9.92	43.80	74.00	-30.20	peak	V
7622.000	32.59	13.25	45.84	74.00	-28.16	peak	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5670MHz			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
2827.000	37.39	5.66	43.05	74.00	-30.95	peak	H
4577.000	35.26	9.87	45.13	74.00	-28.87	peak	H
7678.000	33.96	13.30	47.26	74.00	-26.74	peak	H
2827.000	36.76	5.66	42.42	74.00	-31.58	peak	V
4605.000	33.80	9.92	43.72	74.00	-30.28	peak	V
7650.000	34.05	13.27	47.32	74.00	-26.68	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5290MHz			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	36.11	5.67	41.78	74.00	-32.22	peak	H
4598.000	32.02	9.91	41.93	74.00	-32.07	peak	H
7643.000	31.10	13.27	44.37	74.00	-29.63	peak	H
2806.000	35.69	5.61	41.30	74.00	-32.70	peak	V
4570.000	32.13	9.87	42.00	74.00	-32.00	peak	V
7657.000	33.32	13.28	46.60	74.00	-27.40	peak	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5530MHz			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
2827.000	36.84	5.66	42.50	74.00	-31.50	peak	H
4598.000	33.51	9.91	43.42	74.00	-30.58	peak	H
7671.000	33.29	13.30	46.59	74.00	-27.41	peak	H
2806.000	36.75	5.61	42.36	74.00	-31.64	peak	V
4570.000	33.98	9.87	43.85	74.00	-30.15	peak	V
7657.000	33.23	13.28	46.51	74.00	-27.49	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			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:	5610MHz			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
2827.000	37.39	5.66	43.05	74.00	-30.95	peak	H
4577.000	34.36	9.87	44.23	74.00	-29.77	peak	H
7671.000	33.22	13.30	46.52	74.00	-27.48	peak	H
2841.000	37.34	5.70	43.04	74.00	-30.96	peak	V
4570.000	34.24	9.87	44.11	74.00	-29.89	peak	V
7650.000	33.31	13.27	46.58	74.00	-27.42	peak	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Transmitter Radiated Emissions		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

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

Band Edge

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Band Edge		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:		5320 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
5350.000	49.01	11.05	60.06	74.00	-13.94	peak	H
5350.000	37.73	11.05	48.78	54.00	-5.22	AVG	H
5352.060	49.28	11.05	60.33	74.00	-13.67	peak	H
5352.060	36.65	11.05	47.70	54.00	-6.30	AVG	H
5350.000	52.08	11.05	63.13	74.00	-10.87	peak	V
5350.000	41.07	11.05	52.12	54.00	-1.88	AVG	H
5357.100	50.20	11.06	61.26	74.00	-12.74	peak	V
5357.100	39.70	11.06	50.76	54.00	-3.24	AVG	V

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Band Edge		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:		5500 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
5458.300	47.50	11.21	58.71	74.00	-15.29	peak	H
5458.300	34.90	11.21	46.11	54.00	-7.89	AVG	H
5460.000	46.44	11.21	57.65	74.00	-16.35	peak	H
5460.000	35.36	11.21	46.57	54.00	-7.43	AVG	H
5455.300	47.27	11.20	58.47	74.00	-15.53	peak	V
5455.300	35.53	11.20	46.73	54.00	-7.27	AVG	H
5460.000	45.31	11.21	56.52	74.00	-17.48	peak	V
5460.000	37.80	11.21	49.01	54.00	-4.99	AVG	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Band Edge		Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO		Temp.(℃)/Hum.(%RH):		26(℃)/60%RH	
Test Mode:		Mode 3		Date:		07/09/2015	
Frequency:		5320 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
5350.000	45.36	11.05	56.41	74.00	-17.59	peak	H
5350.000	34.96	11.05	46.01	54.00	-7.99	AVG	H
5351.220	47.62	11.05	58.67	74.00	-15.33	peak	H
5351.220	34.90	11.05	45.95	54.00	-8.05	AVG	H
5350.000	51.29	11.05	62.34	74.00	-11.66	peak	V
5350.000	40.18	11.05	51.23	54.00	-2.77	AVG	V
5356.540	50.22	11.06	61.28	74.00	-12.72	peak	V
5356.540	39.58	11.06	50.64	54.00	-3.36	AVG	V

Standard:		FCC Part 15E			Test Distance:		3m	
Test item:		Band Edge			Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO			Temp.(℃)/Hum.(%RH):		26(℃)/60%RH	
Test Mode:		Mode 3			Date:		07/09/2015	
Frequency:		5500 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	
5453.800	46.34	11.20	57.54	74.00	-16.46	peak	H	
5453.800	34.58	11.20	45.78	54.00	-8.22	AVG	H	
5460.000	46.79	11.21	58.00	74.00	-16.00	peak	H	
5460.000	34.91	11.21	46.12	54.00	-7.88	AVG	H	
5456.500	48.74	11.21	59.95	74.00	-14.05	peak	V	
5456.500	36.40	11.21	47.61	54.00	-6.39	AVG	V	
5460.000	45.23	11.21	56.44	74.00	-17.56	peak	V	
5460.000	37.23	11.21	48.44	54.00	-5.56	AVG	V	

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Band Edge		Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO		Temp.(℃)/Hum.(%RH):		26(℃)/60%RH	
Test Mode:		Mode 4		Date:		07/09/2015	
Frequency:		5310 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
5350.000	42.31	11.05	53.36	74.00	-20.64	peak	H
5350.000	33.28	11.05	44.33	54.00	-9.67	AVG	H
5350.800	44.24	11.05	55.29	74.00	-18.71	peak	H
5350.800	33.23	11.05	44.28	54.00	-9.72	AVG	H
5350.000	53.47	11.05	64.52	74.00	-9.48	peak	V
5350.000	37.12	11.05	48.17	54.00	-5.83	AVG	V
5354.300	55.03	11.05	66.08	74.00	-7.92	peak	V
5354.300	36.54	11.05	47.59	54.00	-6.41	AVG	V

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Band Edge		Power:		AC 120V/60Hz	
Model Number:		UAP-AC-PRO		Temp.(℃)/Hum.(%RH):		26(℃)/60%RH	
Test Mode:		Mode 4		Date:		07/09/2015	
Frequency:		5510 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
5451.760	53.26	11.19	64.45	74.00	-9.55	peak	H
5451.760	37.59	11.19	48.78	54.00	-5.22	AVG	H
5460.000	52.33	11.21	63.54	74.00	-10.46	peak	H
5460.000	37.89	11.21	49.10	54.00	-4.90	AVG	H
5454.160	55.66	11.20	66.86	74.00	-7.14	peak	V
5454.160	40.42	11.20	51.62	54.00	-2.38	AVG	V
5460.000	49.25	11.21	60.46	74.00	-13.54	peak	V
5460.000	40.01	11.21	51.22	54.00	-2.78	AVG	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Band Edge			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:	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:	Band Edge			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:	5290 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
5350.000	45.67	11.05	56.72	74.00	-17.28	peak	H
5350.000	35.41	11.05	46.46	54.00	-7.54	AVG	H
5355.790	48.40	11.05	59.45	74.00	-14.55	peak	H
5355.790	35.00	11.05	46.05	54.00	-7.95	AVG	H
5350.000	55.63	11.05	66.68	74.00	-7.32	peak	V
5350.000	41.62	11.05	52.67	54.00	-1.33	AVG	V
5352.900	54.34	11.05	65.39	74.00	-8.61	peak	V
5352.900	41.39	11.05	52.44	54.00	-1.56	AVG	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Band Edge		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:		5530 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
5446.000	51.82	11.19	63.01	74.00	-10.99	peak	H
5446.000	38.85	11.19	50.04	54.00	-3.96	AVG	H
5460.000	50.57	11.21	61.78	74.00	-12.22	peak	H
5460.000	38.36	11.21	49.57	54.00	-4.43	AVG	H
5444.500	54.20	11.19	65.39	74.00	-8.61	peak	V
5444.500	39.75	11.19	50.94	54.00	-3.06	AVG	V
5460.000	54.39	11.21	65.60	74.00	-8.40	peak	V
5460.000	40.07	11.21	51.28	54.00	-2.72	AVG	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

4.2. Maximum Conducted Output Power Measurement

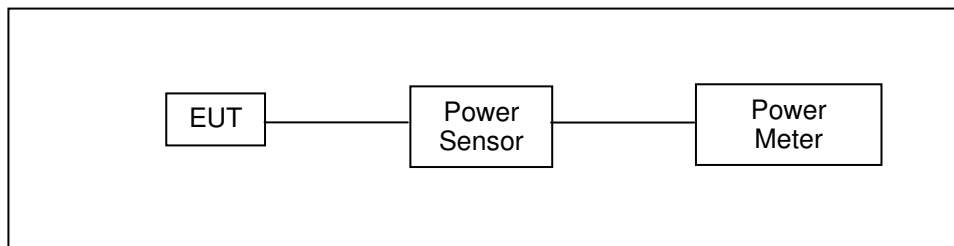
■ Limit

Conducted Output Power

Frequency Range (MHz)	FCC Limit
5.150 ~ 5.250 GHz	The lesser of 1W (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.

■ Test Setup



■ Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
Power Sensor	Anritsu	MA2411B	1126022	08/21/2014	1 year
Power Meter	Anritsu	ML2495A	1135009	08/21/2014	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

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

■ 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.

■ 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		07/09/2015								
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		ANT-0+1+2		FCC Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5260.0	6M	16.32	0.043	16.27	0.042	15.64	0.037	20.86	0.122	< 24
5280.0		16.64	0.046	16.39	0.044	15.77	0.038	21.05	0.127	
5300.0		16.95	0.050	16.80	0.048	16.12	0.041	21.41	0.138	
5320.0		17.18	0.052	17.15	0.052	16.47	0.044	21.72	0.148	
5500.0		18.02	0.063	18.01	0.063	17.71	0.059	22.69	0.186	< 24
5520.0		17.84	0.061	17.54	0.057	17.36	0.054	22.36	0.172	
5540.0		17.60	0.058	17.45	0.056	17.35	0.054	22.24	0.167	
5560.0		17.40	0.055	17.33	0.054	17.27	0.053	22.10	0.162	
5580.0		17.23	0.053	17.22	0.053	16.97	0.050	21.91	0.155	
5600.0		17.08	0.051	17.05	0.051	16.80	0.048	21.75	0.150	
5620.0		16.92	0.049	16.87	0.049	16.64	0.046	21.58	0.144	
5640.0		16.76	0.047	16.67	0.046	16.61	0.046	21.45	0.140	
5660.0		17.10	0.051	16.87	0.049	16.75	0.047	21.68	0.147	
5680.0		17.20	0.052	16.85	0.048	16.84	0.048	21.74	0.149	
5700.0		17.66	0.058	17.13	0.052	16.87	0.049	22.00	0.159	
5260.0	54M	16.22	0.042	15.80	0.038	15.34	0.034	20.57	0.114	< 24
5280.0		16.04	0.040	15.92	0.039	15.26	0.034	20.52	0.113	
5300.0		16.39	0.044	16.26	0.042	15.78	0.038	20.92	0.124	
5320.0		16.75	0.047	16.63	0.046	15.93	0.039	21.22	0.133	
5500.0		17.65	0.058	17.62	0.058	17.32	0.054	22.30	0.170	< 24
5520.0		17.48	0.056	17.25	0.053	17.04	0.051	22.03	0.160	
5540.0		17.06	0.051	17.02	0.050	16.96	0.050	21.78	0.151	
5560.0		16.93	0.049	16.87	0.049	16.80	0.048	21.64	0.146	
5580.0		16.79	0.048	16.63	0.046	16.58	0.045	21.44	0.139	
5600.0		16.69	0.047	16.65	0.046	16.48	0.044	21.38	0.137	
5620.0		16.48	0.044	16.43	0.044	16.16	0.041	21.13	0.130	
5640.0		16.31	0.043	16.22	0.042	15.97	0.040	20.94	0.124	
5660.0		16.66	0.046	16.43	0.044	16.11	0.041	21.18	0.131	
5680.0		16.71	0.047	16.39	0.044	16.38	0.043	21.27	0.134	
5700.0		17.22	0.053	16.67	0.046	16.58	0.045	21.60	0.145	

Model Number		UAP-AC-PRO								
Test Item		Maximum Conducted Output Power								
Test Mode		Mode 3: IEEE 802.11n 5GHz 20MHz link mode								
Date of Test		07/09/2015								
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		ANT-0+1+2		FCC Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5260.0	19.5M	17.37	0.055	17.23	0.053	16.54	0.045	21.83	0.153	< 24
5280.0		17.84	0.061	17.59	0.057	16.98	0.050	22.26	0.168	
5300.0		17.91	0.062	17.82	0.061	17.05	0.051	22.38	0.173	
5320.0		18.16	0.065	18.08	0.064	17.32	0.054	22.64	0.184	
5500.0		18.04	0.064	17.97	0.063	17.84	0.061	22.72	0.187	< 24
5520.0		17.78	0.060	17.59	0.057	17.55	0.057	22.41	0.174	
5540.0		17.58	0.057	17.52	0.056	17.48	0.056	22.30	0.170	
5560.0		17.46	0.056	17.27	0.053	17.09	0.051	22.05	0.160	
5580.0		17.33	0.054	17.15	0.052	17.06	0.051	21.95	0.157	
5600.0		17.20	0.052	16.89	0.049	16.60	0.046	21.67	0.147	
5620.0		16.91	0.049	16.71	0.047	16.64	0.046	21.53	0.142	
5640.0		16.96	0.050	16.63	0.046	16.54	0.045	21.48	0.141	
5660.0		16.84	0.048	16.76	0.047	16.74	0.047	21.55	0.143	
5680.0		17.20	0.052	17.05	0.051	16.98	0.050	21.85	0.153	
5700.0		17.59	0.057	17.35	0.054	17.23	0.053	22.16	0.165	
5260.0	19.5M	16.90	0.049	16.80	0.048	16.17	0.041	21.41	0.138	< 24
5280.0		17.44	0.055	16.89	0.049	16.49	0.045	21.73	0.149	
5300.0		17.39	0.055	17.23	0.053	16.64	0.046	21.87	0.154	
5320.0		17.93	0.062	17.65	0.058	17.30	0.054	22.41	0.174	
5500.0		17.65	0.058	17.53	0.057	17.43	0.055	22.31	0.170	< 24
5520.0		17.43	0.055	17.20	0.052	16.91	0.049	21.96	0.157	
5540.0		17.22	0.053	17.14	0.052	17.04	0.051	21.91	0.155	
5560.0		17.04	0.051	16.96	0.050	16.67	0.046	21.66	0.147	
5580.0		16.92	0.049	16.72	0.047	16.63	0.046	21.53	0.142	
5600.0		16.80	0.048	16.43	0.044	16.31	0.043	21.29	0.135	
5620.0		16.51	0.045	16.39	0.044	16.31	0.043	21.18	0.131	
5640.0		16.53	0.045	16.42	0.044	16.15	0.041	21.14	0.130	
5660.0		16.35	0.043	16.26	0.042	16.13	0.041	21.02	0.126	
5680.0		16.70	0.047	16.38	0.043	16.24	0.042	21.22	0.132	
5700.0		17.26	0.053	17.01	0.050	16.93	0.049	21.84	0.153	

Model Number		UAP-AC-PRO								
Test Item		Maximum Conducted Output Power								
Test Mode		Mode 4: IEEE 802.11n 5GHz 40MHz link mode								
Date of Test		07/09/2015								
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		ANT-0+1+2		FCC Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5270.0	40.5M	12.78	0.019	12.67	0.018	11.93	0.016	17.25	0.053	< 24
5310.0		13.40	0.022	13.22	0.021	12.48	0.018	17.82	0.061	
5510.0		17.37	0.055	17.25	0.053	17.01	0.050	21.98	0.158	< 24
5550.0		16.97	0.050	16.89	0.049	16.81	0.048	21.66	0.147	
5590.0		16.71	0.047	16.66	0.046	16.43	0.044	21.37	0.137	
5630.0		16.34	0.043	16.28	0.042	16.14	0.041	21.03	0.127	
5670.0		16.35	0.043	16.25	0.042	16.18	0.041	21.03	0.127	
5270.0	405M	12.32	0.017	12.26	0.017	11.53	0.014	16.82	0.048	< 24
5310.0		13.03	0.020	12.73	0.019	12.04	0.016	17.39	0.055	
5510.0		16.86	0.049	16.78	0.048	16.58	0.045	21.51	0.142	< 24
5550.0		16.48	0.044	16.42	0.044	16.33	0.043	21.18	0.131	
5590.0		16.11	0.041	16.03	0.040	15.87	0.039	20.78	0.120	
5630.0		15.73	0.037	15.64	0.037	15.61	0.036	20.43	0.110	
5670.0		15.82	0.038	15.75	0.038	15.72	0.037	20.53	0.113	

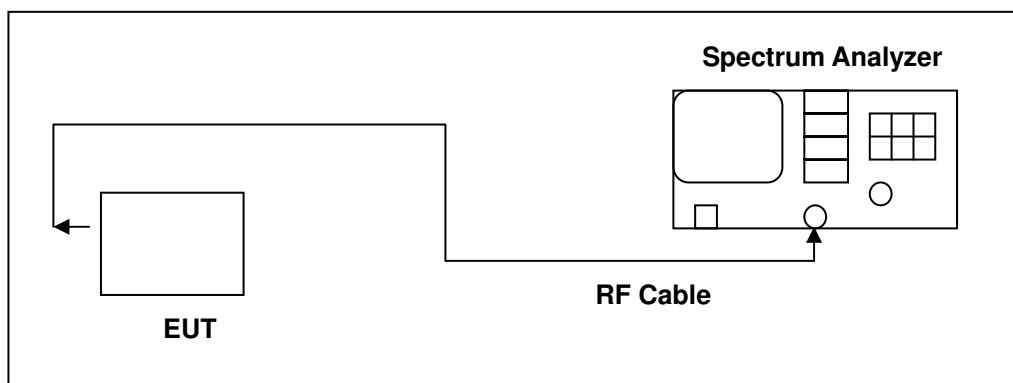
Model Number		UAP-AC-PRO								
Test Item		Maximum Conducted Output Power								
Test Mode		Mode 5: IEEE 802.11ac 80MHz Link Mode								
Date of Test		07/09/2015								
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		ANT-0+1+2		FCC Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5270.0	87.9M	13.86	0.024	13.76	0.024	12.99	0.020	18.32	0.068	< 24
5310.0		14.69	0.029	14.67	0.029	14.65	0.029	19.44	0.088	< 24
5510.0		14.25	0.027	14.20	0.026	14.17	0.026	18.98	0.079	
5270.0	1733.2M	13.66	0.023	13.43	0.022	12.64	0.018	18.04	0.064	< 24
5310.0		14.48	0.028	14.34	0.027	14.30	0.027	19.15	0.082	< 24
5510.0		14.15	0.026	13.74	0.024	13.66	0.023	18.63	0.073	

4.3. 26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement

■ **Limit**

N/A

■ **Test Setup**



■ **Test Instruments**

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

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

■ **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.

Test Result

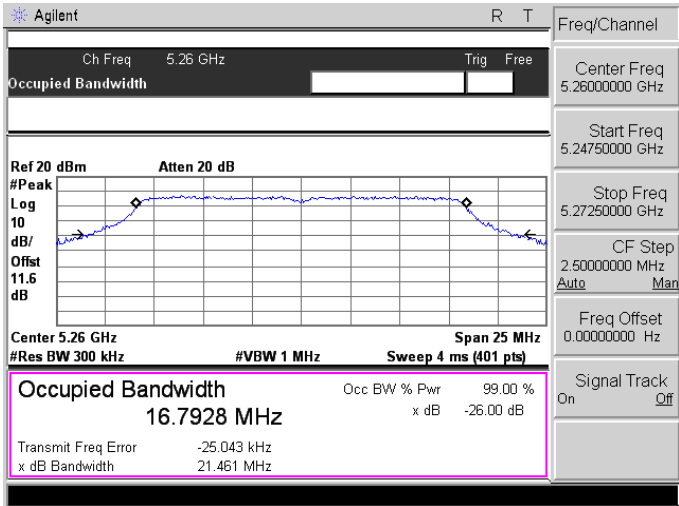
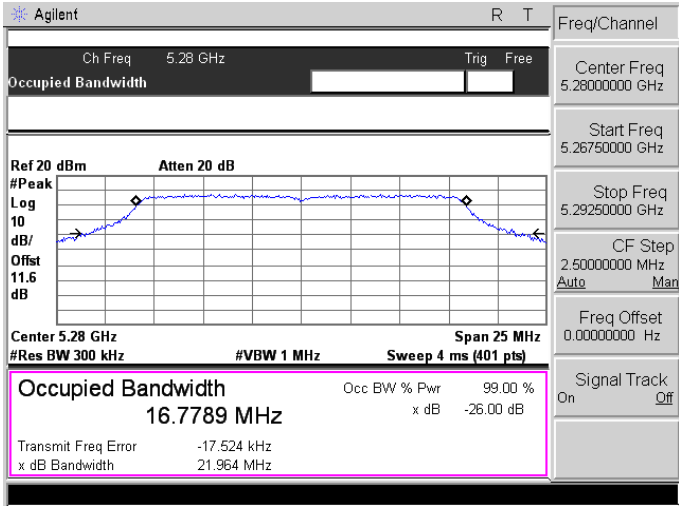
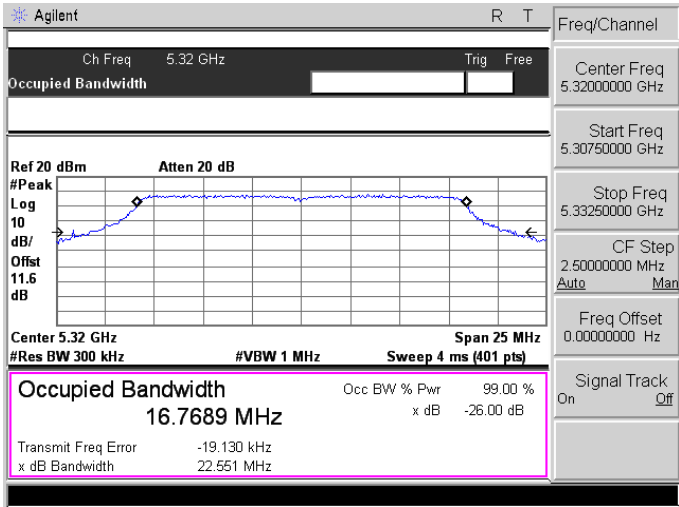
Model Number	UAP-AC-PRO					
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth					
Test Mode	Mode 2: IEEE 802.11a Link Mode					
Date of Test	07/14/2015					
Frequency (MHz)	26dB Bandwidth (MHz)			99% Occupied Bandwidth (MHz)		
	ANT-0	ANT-1	ANT-2	ANT-0	ANT-1	ANT-2
5260	21.461	21.950	22.080	16.7928	16.6731	16.6898
5280	21.964	21.984	21.307	16.7789	16.7442	16.6366
5320	22.551	22.057	21.339	16.7689	16.7440	16.5787
5500	23.558	21.965	22.158	16.8266	16.7302	16.6935
5560	23.271	21.528	22.038	16.8270	16.7089	16.6648
5700	23.091	22.412	22.277	16.8111	16.6970	16.6947

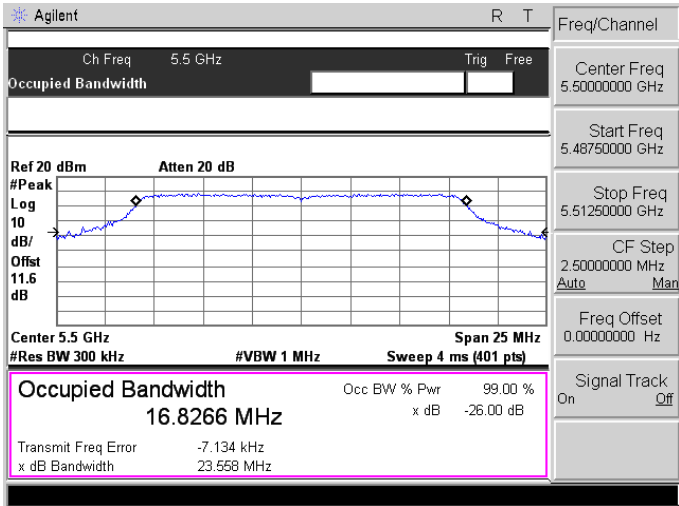
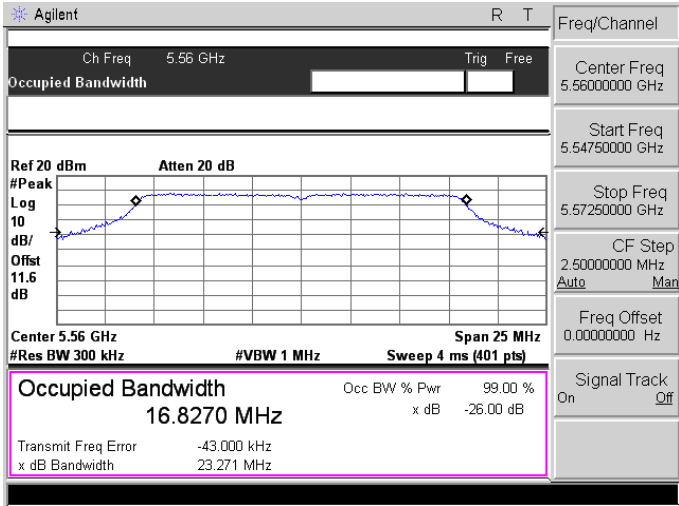
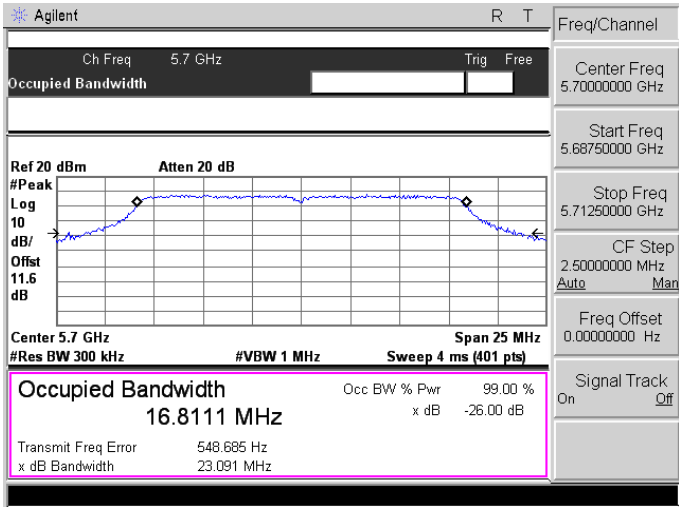
Model Number	UAP-AC-PRO					
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth					
Test Mode	Mode 3: IEEE 802.11n 5GHz 20MHz link mode					
Date of Test	07/14/2015					
Frequency (MHz)	26dB Bandwidth (MHz)			99% Occupied Bandwidth (MHz)		
	ANT-0	ANT-1	ANT-2	ANT-0	ANT-1	ANT-2
5260	22.756	23.376	22.569	17.9042	17.8414	17.8395
5280	22.848	22.740	23.332	17.8832	17.8210	17.8608
5320	22.814	23.249	22.641	17.8802	17.8288	17.8271
5500	23.059	22.477	23.153	17.8994	17.8320	17.8220
5560	23.486	22.343	22.371	17.9053	17.8320	17.8146
5700	22.830	23.014	22.865	17.9057	17.7881	17.7985

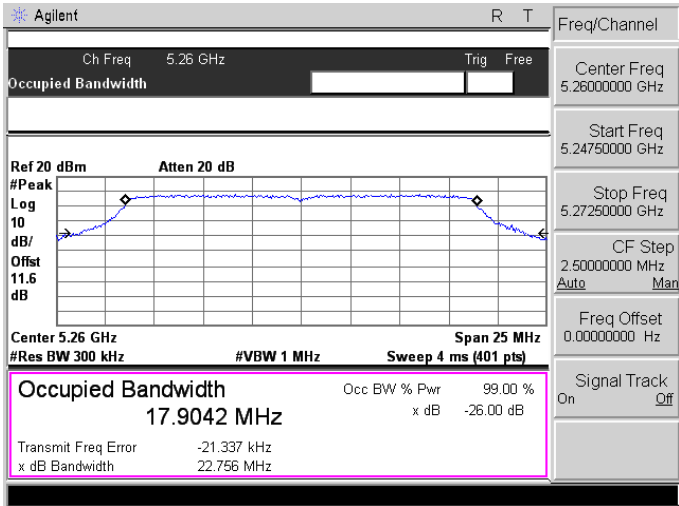
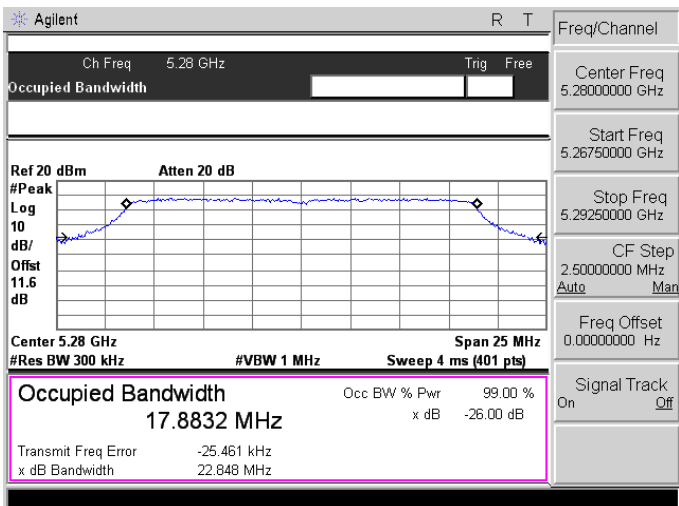
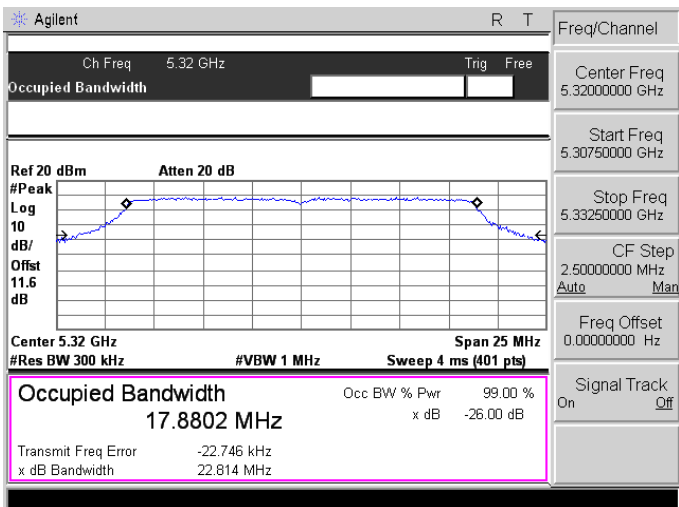
Model Number	UAP-AC-PRO					
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth					
Test Mode	Mode 4: IEEE 802.11n 5GHz 40MHz link mode					
Date of Test	07/14/2015					
Frequency (MHz)	26dB Bandwidth (MHz)			99% Occupied Bandwidth (MHz)		
	ANT-0	ANT-1	ANT-2	ANT-0	ANT-1	ANT-2
5270	46.179	45.235	44.821	36.9436	36.7763	36.6746
5310	46.204	45.195	44.050	36.7806	36.7465	36.7231
5510	47.022	44.241	44.907	36.9031	36.6528	36.6862
5590	46.791	44.186	44.310	36.8135	36.7089	36.7094
5670	45.234	44.654	44.881	36.6931	36.7035	36.6525

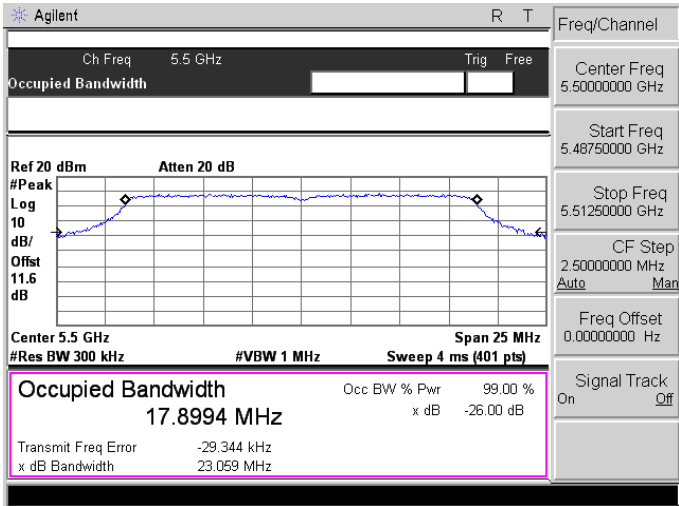
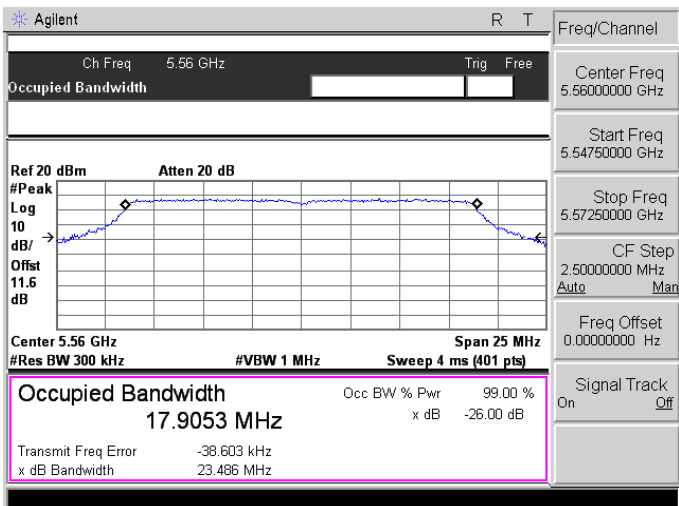
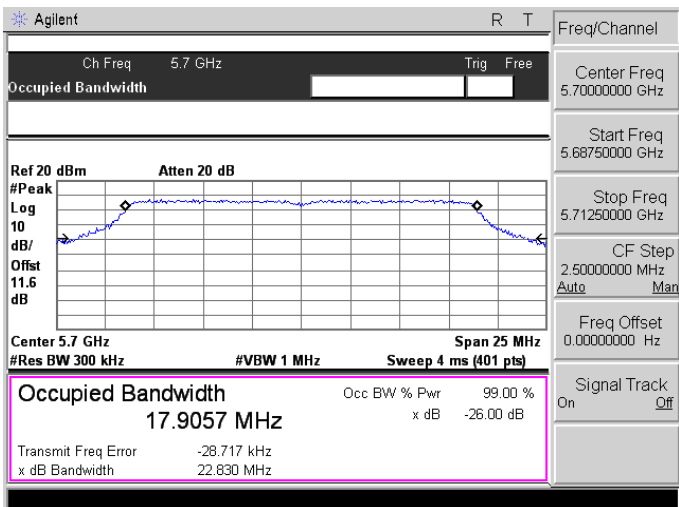
Model Number	UAP-AC-PRO					
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth					
Test Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode					
Date of Test	07/14/2015					
Frequency (MHz)	26dB Bandwidth (MHz)			99% Occupied Bandwidth (MHz)		
	ANT-0	ANT-1	ANT-2	ANT-0	ANT-1	ANT-2
5290	88.643	87.983	85.327	75.7832	75.6040	75.5189
5530	86.092	87.248	86.317	75.6217	75.7649	75.5714
5610	87.915	85.492	87.182	75.7493	75.4807	75.7141

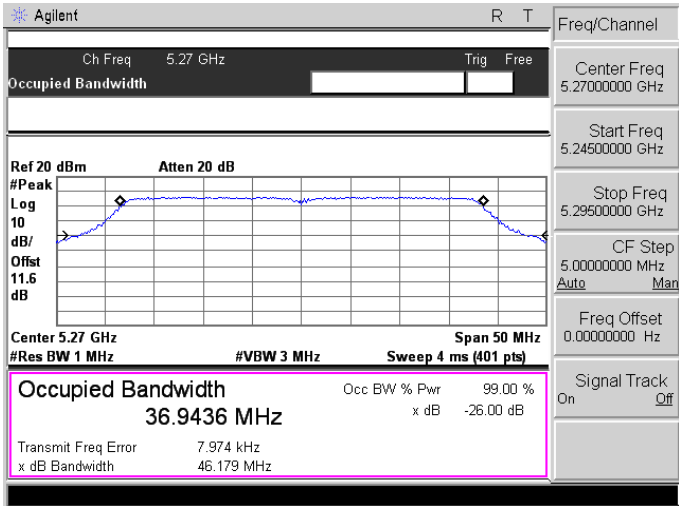
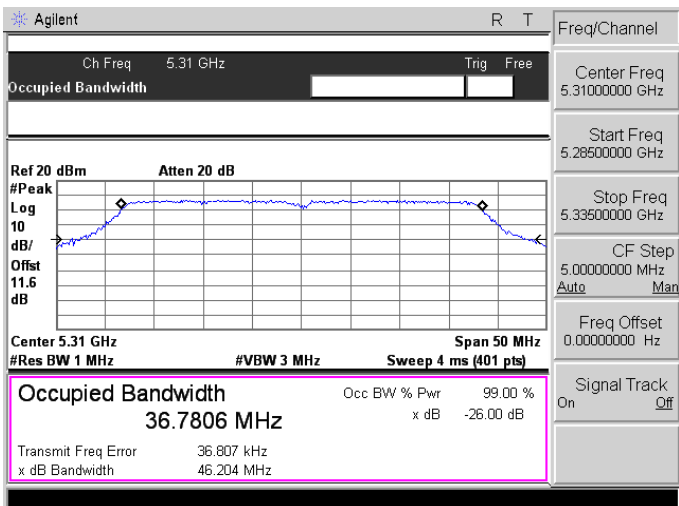
■ Test Graphs

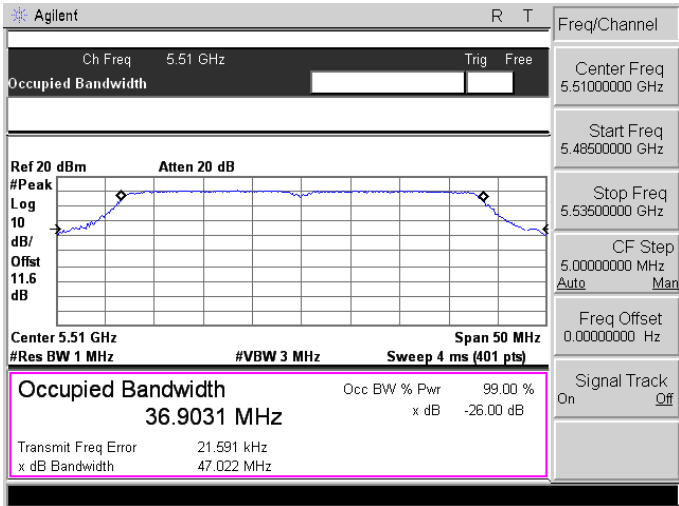
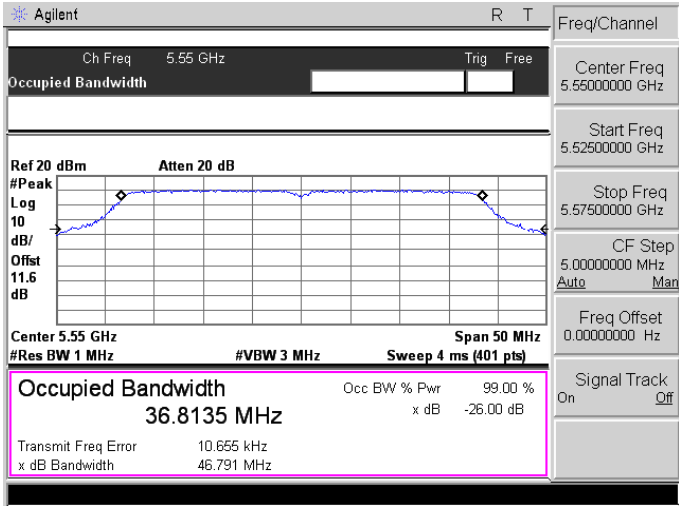
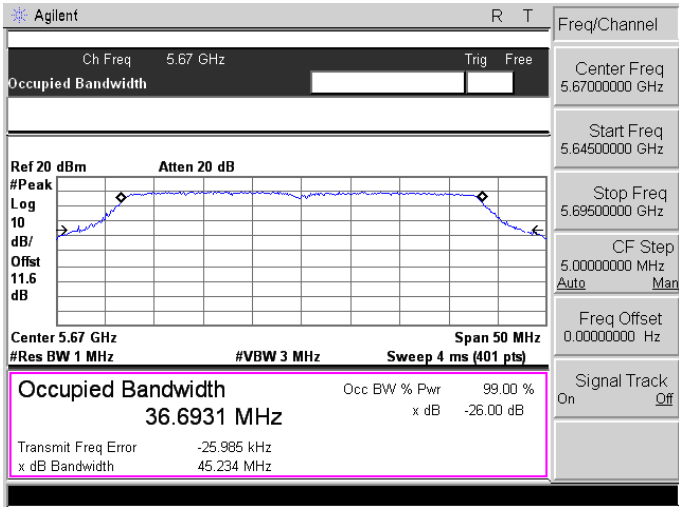
Mode 2: IEEE 802.11a Link Mode_ANT-0 5260	 Agilent R T Ch Freq 5.26 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.26 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.7928 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -25.043 kHz x dB Bandwidth 21.461 MHz Freq/Channel Center Freq 5.26000000 GHz Start Freq 5.24750000 GHz Stop Freq 5.27250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5280	 Agilent R T Ch Freq 5.28 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.28 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.7789 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -17.524 kHz x dB Bandwidth 21.964 MHz Freq/Channel Center Freq 5.28000000 GHz Start Freq 5.26750000 GHz Stop Freq 5.29250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5320	 Agilent R T Ch Freq 5.32 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.32 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.7689 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -19.130 kHz x dB Bandwidth 22.551 MHz Freq/Channel Center Freq 5.32000000 GHz Start Freq 5.30750000 GHz Stop Freq 5.33250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

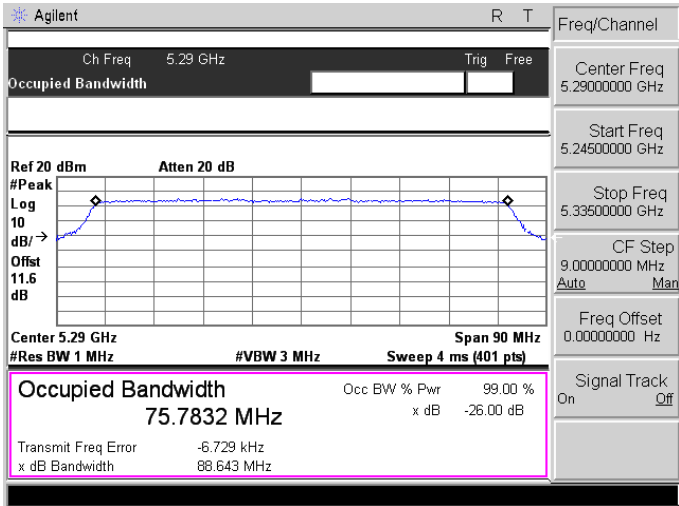
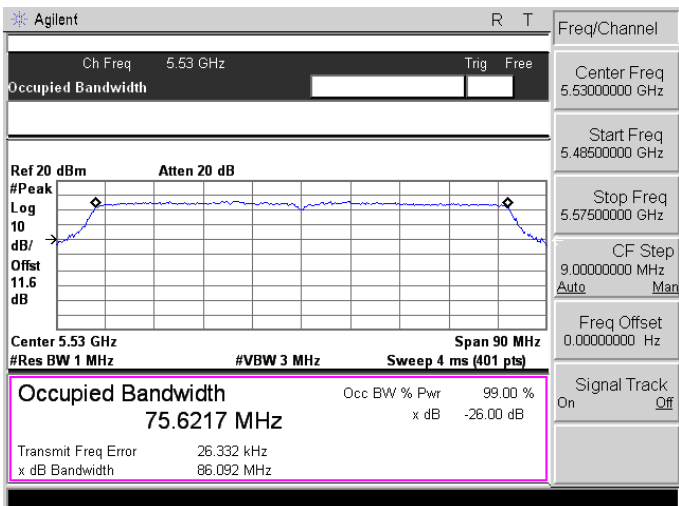
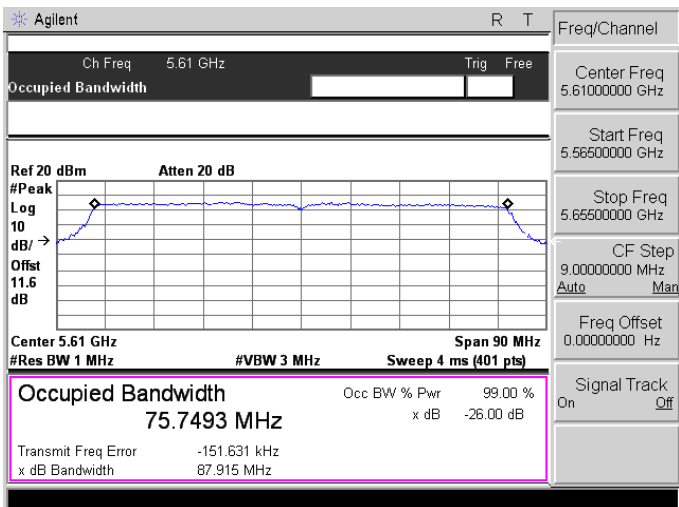
Mode 2: IEEE 802.11a Link Mode_ANT-0	
5500	 Agilent R T Ch Freq 5.5 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.5 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.8266 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -7.134 kHz x dB Bandwidth 23.558 MHz Freq/Channel Center Freq 5.50000000 GHz Start Freq 5.48750000 GHz Stop Freq 5.51250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5560	 Agilent R T Ch Freq 5.56 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.56 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.8270 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -43.000 kHz x dB Bandwidth 23.271 MHz Freq/Channel Center Freq 5.56000000 GHz Start Freq 5.54750000 GHz Stop Freq 5.57250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5700	 Agilent R T Ch Freq 5.7 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.7 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.8111 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 548.685 Hz x dB Bandwidth 23.091 MHz Freq/Channel Center Freq 5.70000000 GHz Start Freq 5.68750000 GHz Stop Freq 5.71250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

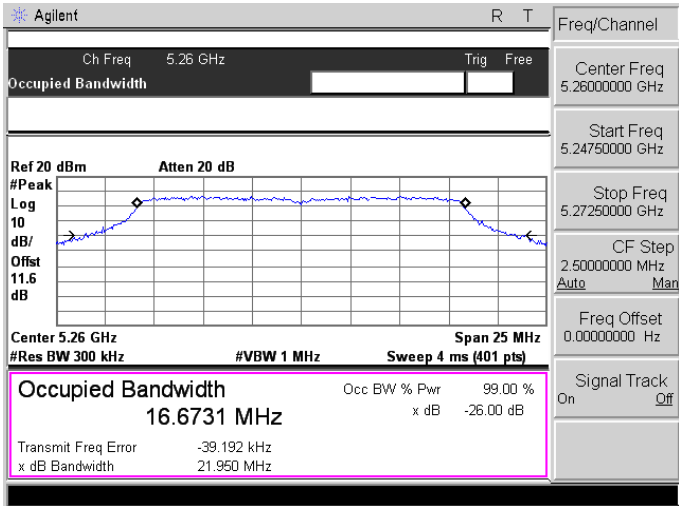
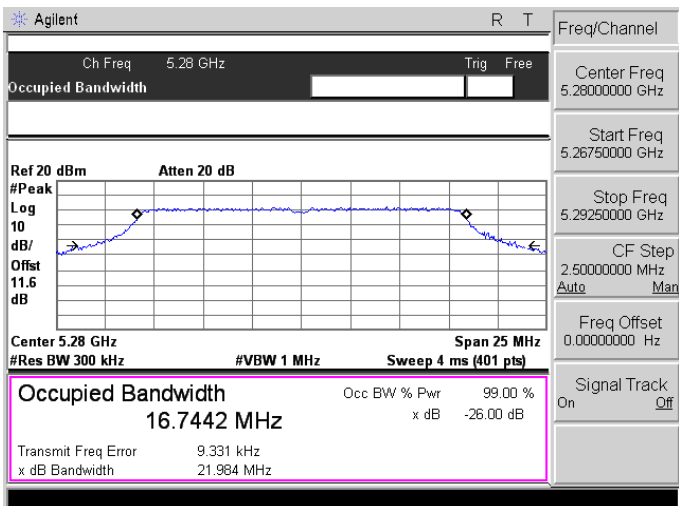
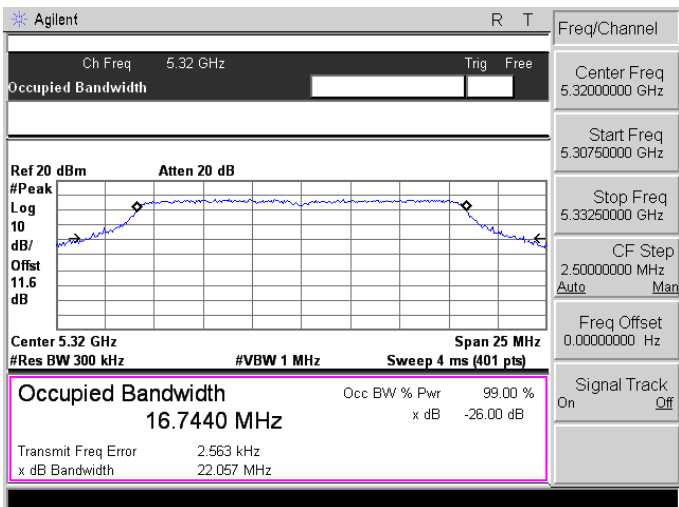
Mode 3: IEEE 802.11n 5GHz 20MHz link mode_ANT-0	
5260	 Agilent R T Ch Freq 5.26 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.26 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.9042 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -21.337 kHz x dB Bandwidth 22.756 MHz Freq/Channel Center Freq 5.26000000 GHz Start Freq 5.24750000 GHz Stop Freq 5.27250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5280	 Agilent R T Ch Freq 5.28 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.28 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8832 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -25.461 kHz x dB Bandwidth 22.848 MHz Freq/Channel Center Freq 5.28000000 GHz Start Freq 5.26750000 GHz Stop Freq 5.29250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5320	 Agilent R T Ch Freq 5.32 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.32 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8802 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -22.746 kHz x dB Bandwidth 22.814 MHz Freq/Channel Center Freq 5.32000000 GHz Start Freq 5.30750000 GHz Stop Freq 5.33250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

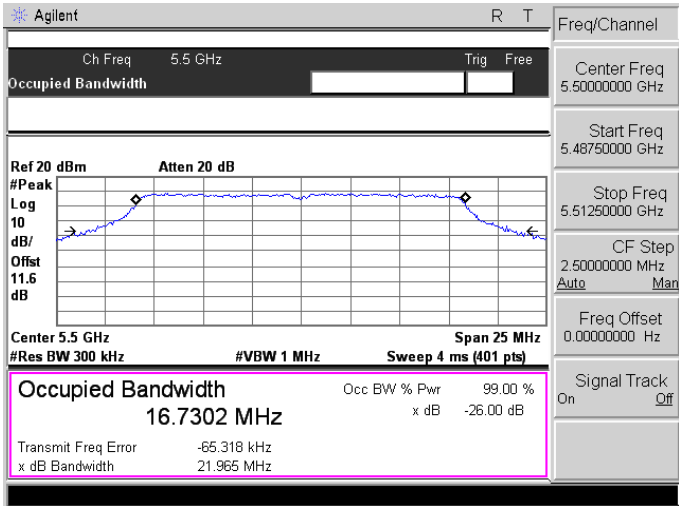
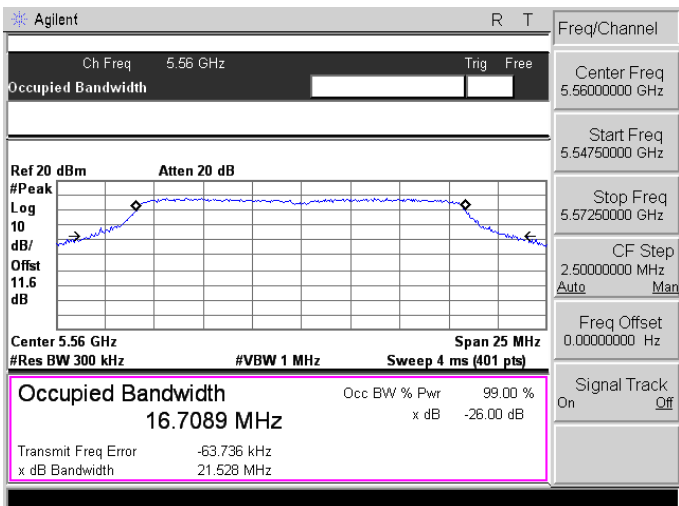
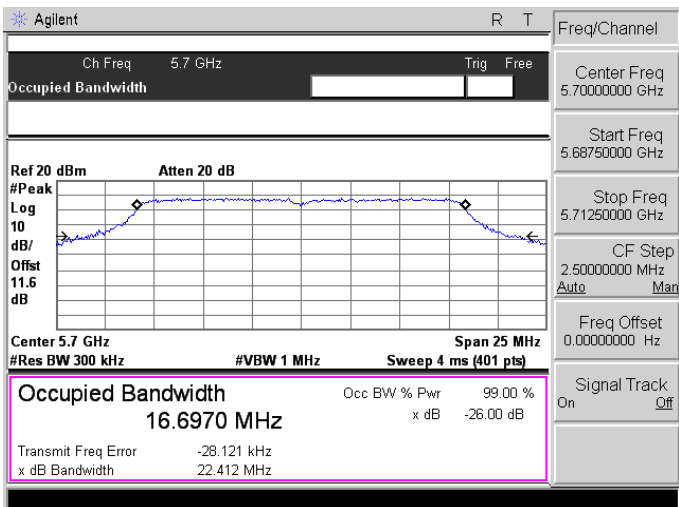
Mode 3: IEEE 802.11n 5GHz 20MHz link mode_ANT-0	
5500	 Agilent R T Ch Freq 5.5 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.5 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8994 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -29.344 kHz x dB Bandwidth 23.059 MHz Freq/Channel Center Freq 5.5000000 GHz Start Freq 5.48750000 GHz Stop Freq 5.51250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5560	 Agilent R T Ch Freq 5.56 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.56 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.9053 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -38.603 kHz x dB Bandwidth 23.486 MHz Freq/Channel Center Freq 5.5600000 GHz Start Freq 5.54750000 GHz Stop Freq 5.57250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5700	 Agilent R T Ch Freq 5.7 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.7 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.9057 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -28.717 kHz x dB Bandwidth 22.830 MHz Freq/Channel Center Freq 5.7000000 GHz Start Freq 5.68750000 GHz Stop Freq 5.71250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

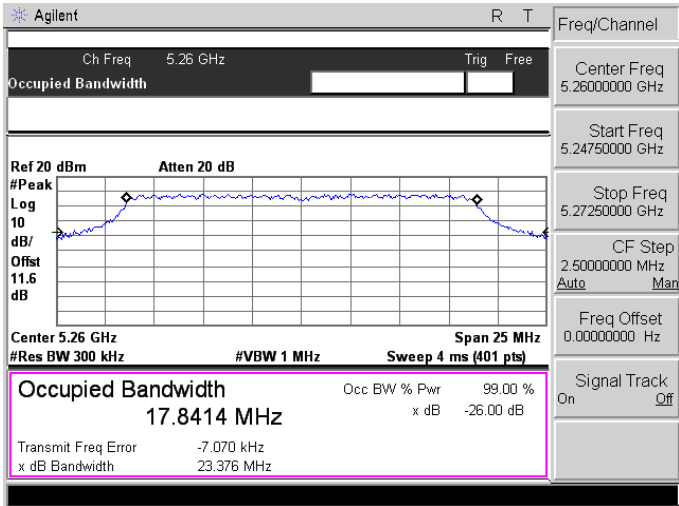
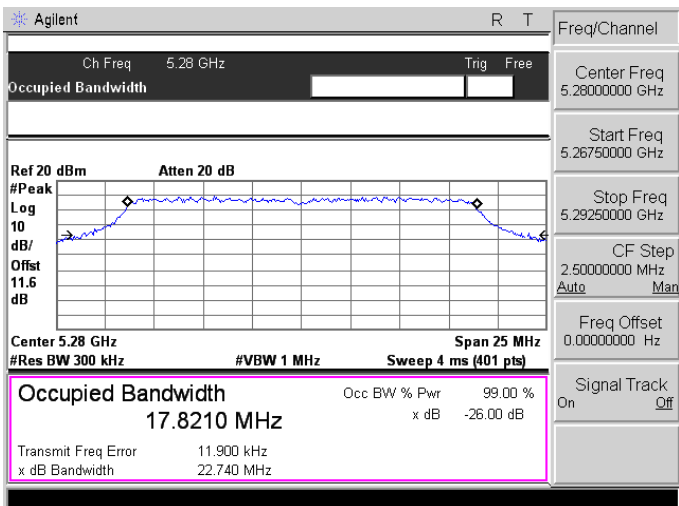
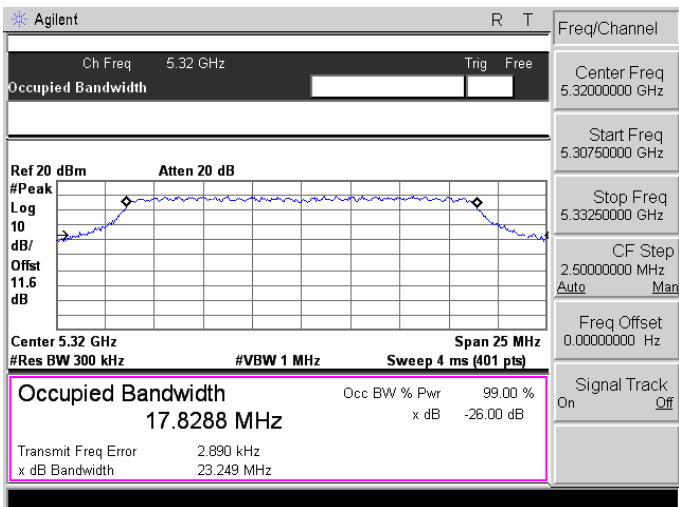
Mode 4: IEEE 802.11n 5GHz 40MHz link mode_ANT-0	
5270	 Agilent R T Ch Freq 5.27 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.27 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.9436 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 7.974 kHz x dB Bandwidth 46.179 MHz Freq/Channel Center Freq 5.27000000 GHz Start Freq 5.24500000 GHz Stop Freq 5.29500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5310	 Agilent R T Ch Freq 5.31 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.31 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.7806 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 36.807 kHz x dB Bandwidth 46.204 MHz Freq/Channel Center Freq 5.31000000 GHz Start Freq 5.28500000 GHz Stop Freq 5.33500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

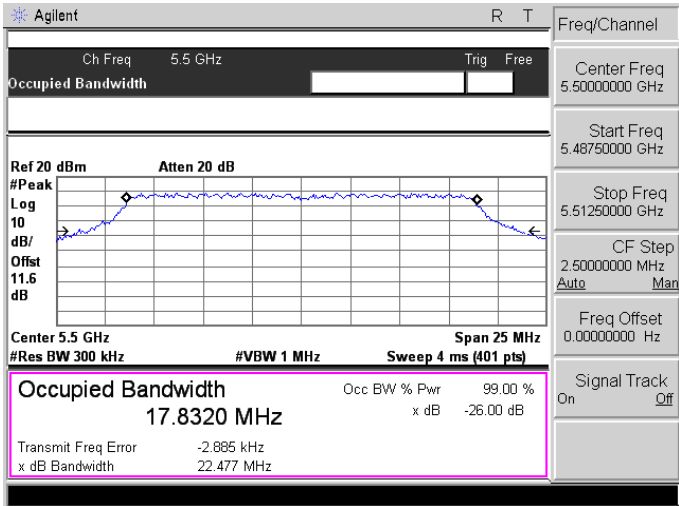
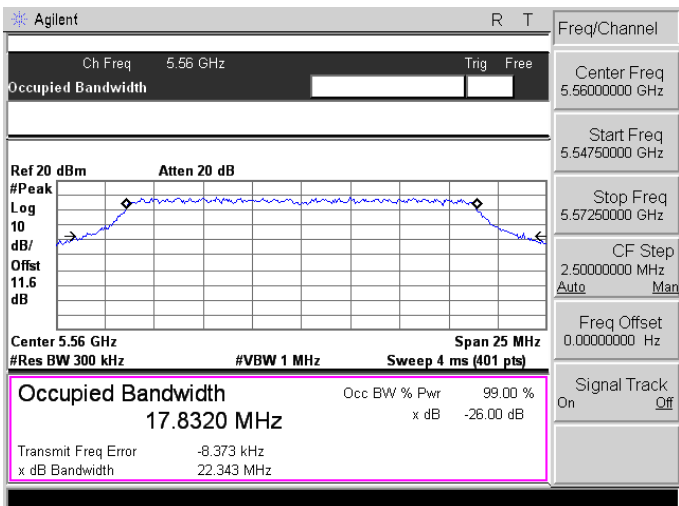
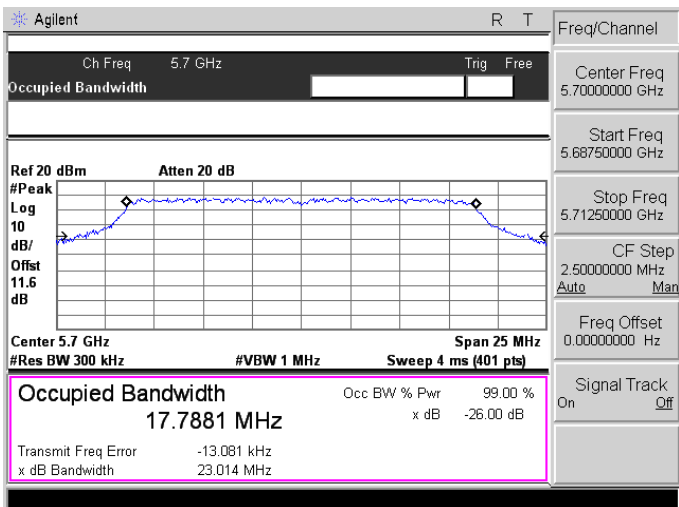
Mode 4: IEEE 802.11n 5GHz 40MHz link mode_ANT-0	
5510	 Agilent R T Ch Freq 5.51 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.51 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.9031 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 21.591 kHz x dB Bandwidth 47.022 MHz Freq/Channel Center Freq 5.51000000 GHz Start Freq 5.48500000 GHz Stop Freq 5.53500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5550	 Agilent R T Ch Freq 5.55 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.55 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.8135 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 10.655 kHz x dB Bandwidth 46.791 MHz Freq/Channel Center Freq 5.55000000 GHz Start Freq 5.52500000 GHz Stop Freq 5.57500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5670	 Agilent R T Ch Freq 5.67 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.67 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.6931 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -25.985 kHz x dB Bandwidth 45.234 MHz Freq/Channel Center Freq 5.67000000 GHz Start Freq 5.64500000 GHz Stop Freq 5.69500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

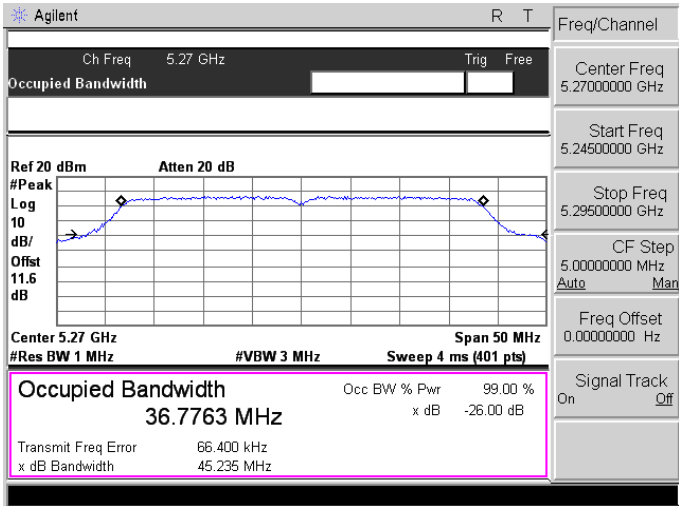
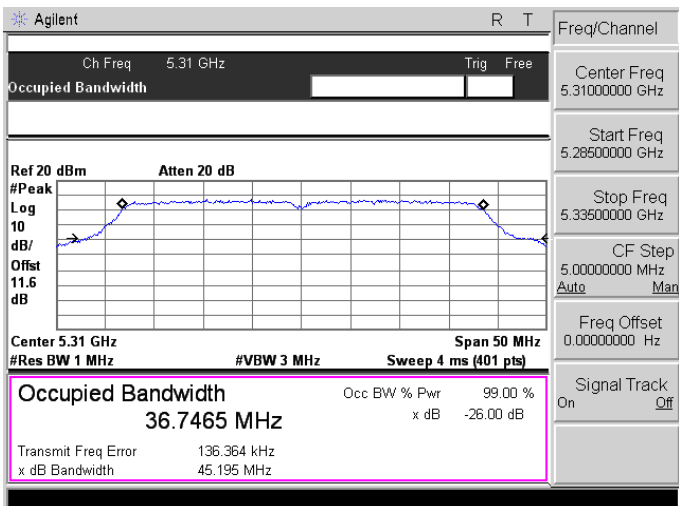
Mode 5: IEEE 802.11ac 80MHz Link Mode_ANT-0	
5290	 Agilent R T Ch Freq 5.29 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/→ Offset 11.6 dB Center 5.29 GHz Span 90 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 75.7832 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -6.729 kHz x dB Bandwidth 88.643 MHz Freq/Channel Center Freq 5.29000000 GHz Start Freq 5.24500000 GHz Stop Freq 5.33500000 GHz CF Step 9.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5530	 Agilent R T Ch Freq 5.53 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/→ Offset 11.6 dB Center 5.53 GHz Span 90 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 75.6217 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 26.332 kHz x dB Bandwidth 86.092 MHz Freq/Channel Center Freq 5.53000000 GHz Start Freq 5.48500000 GHz Stop Freq 5.57500000 GHz CF Step 9.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5610	 Agilent R T Ch Freq 5.61 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/→ Offset 11.6 dB Center 5.61 GHz Span 90 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 75.7493 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -151.631 kHz x dB Bandwidth 87.915 MHz Freq/Channel Center Freq 5.61000000 GHz Start Freq 5.56500000 GHz Stop Freq 5.65500000 GHz CF Step 9.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

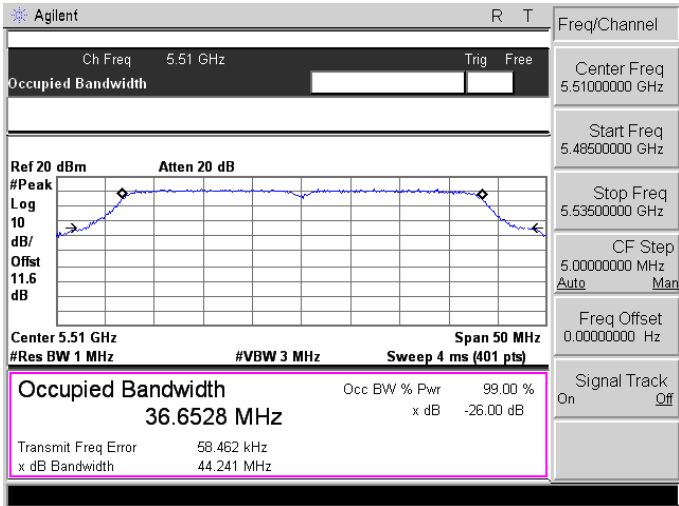
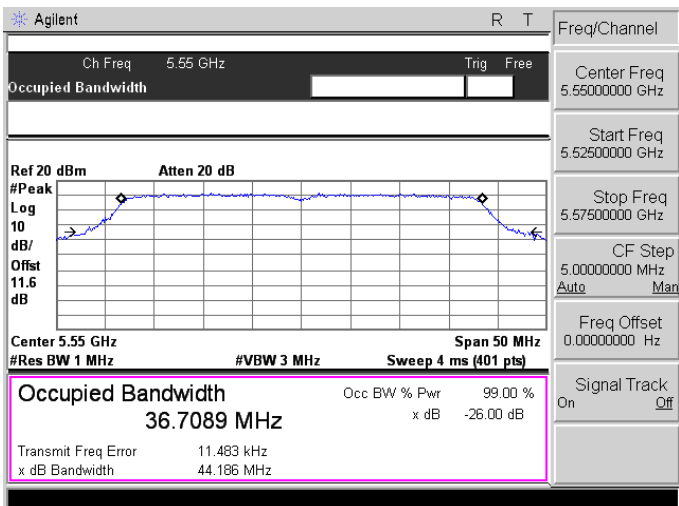
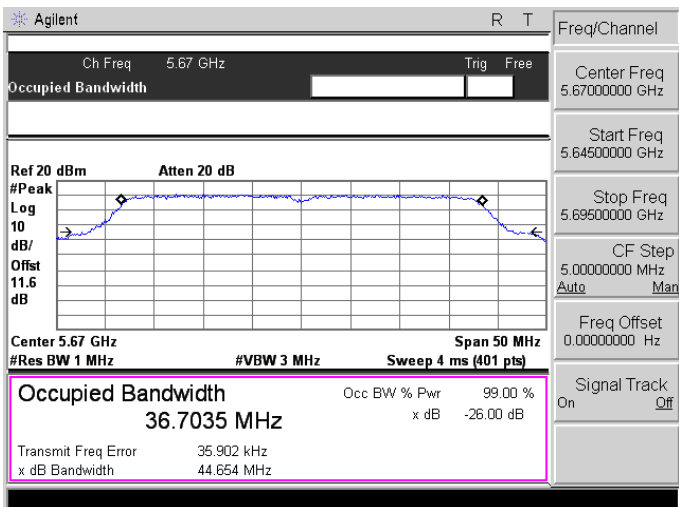
Mode 2: IEEE 802.11a Link Mode_ANT-1	
5260	 Agilent R T Ch Freq 5.26 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.26 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.6731 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -39.192 kHz x dB Bandwidth 21.950 MHz Freq/Channel Center Freq 5.26000000 GHz Start Freq 5.24750000 GHz Stop Freq 5.27250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5280	 Agilent R T Ch Freq 5.28 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.28 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.7442 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 9.331 kHz x dB Bandwidth 21.984 MHz Freq/Channel Center Freq 5.28000000 GHz Start Freq 5.26750000 GHz Stop Freq 5.29250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5320	 Agilent R T Ch Freq 5.32 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.32 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.7440 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 2.563 kHz x dB Bandwidth 22.057 MHz Freq/Channel Center Freq 5.32000000 GHz Start Freq 5.30750000 GHz Stop Freq 5.33250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

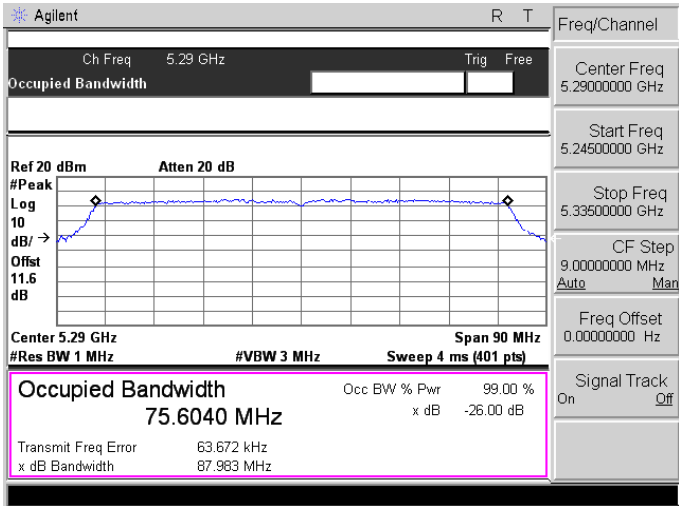
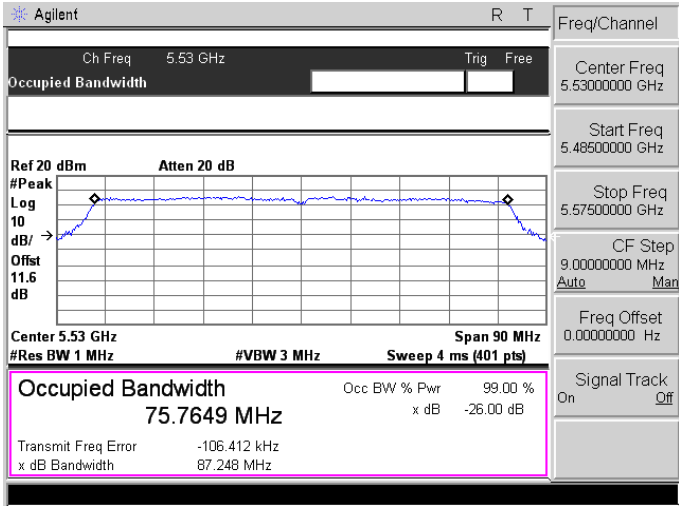
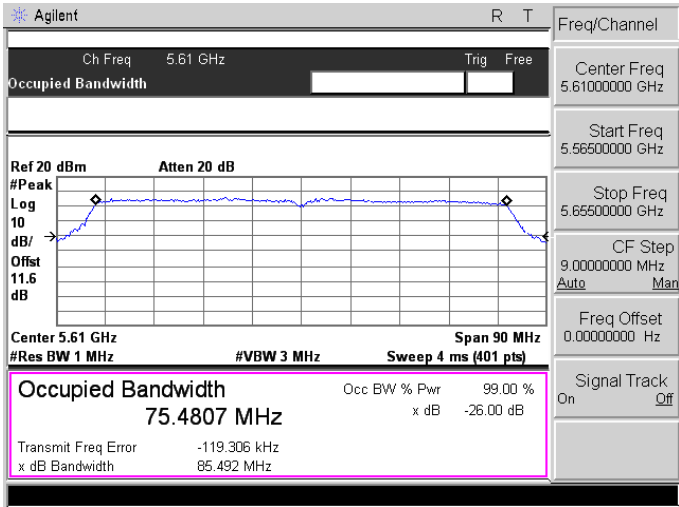
Mode 2: IEEE 802.11a Link Mode_ANT-1	
5500	 Agilent R T Ch Freq 5.5 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.5 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.7302 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -65.318 kHz x dB Bandwidth 21.965 MHz Freq/Channel Center Freq 5.50000000 GHz Start Freq 5.48750000 GHz Stop Freq 5.51250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5560	 Agilent R T Ch Freq 5.56 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.56 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.7089 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -63.736 kHz x dB Bandwidth 21.528 MHz Freq/Channel Center Freq 5.56000000 GHz Start Freq 5.54750000 GHz Stop Freq 5.57250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5700	 Agilent R T Ch Freq 5.7 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.7 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.6970 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -28.121 kHz x dB Bandwidth 22.412 MHz Freq/Channel Center Freq 5.70000000 GHz Start Freq 5.68750000 GHz Stop Freq 5.71250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 3: IEEE 802.11n 5GHz 20MHz link mode_ANT-1	
5260	 Agilent R T Ch Freq 5.26 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.26 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8414 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -7.070 kHz x dB Bandwidth 23.376 MHz Freq/Channel Center Freq 5.26000000 GHz Start Freq 5.24750000 GHz Stop Freq 5.27250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5280	 Agilent R T Ch Freq 5.28 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.28 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8210 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 11.900 kHz x dB Bandwidth 22.740 MHz Freq/Channel Center Freq 5.28000000 GHz Start Freq 5.26750000 GHz Stop Freq 5.29250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5320	 Agilent R T Ch Freq 5.32 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.32 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8288 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 2.890 kHz x dB Bandwidth 23.249 MHz Freq/Channel Center Freq 5.32000000 GHz Start Freq 5.30750000 GHz Stop Freq 5.33250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

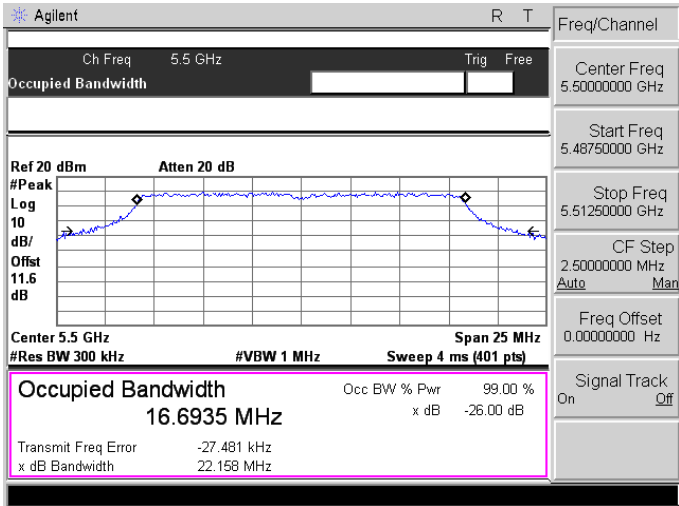
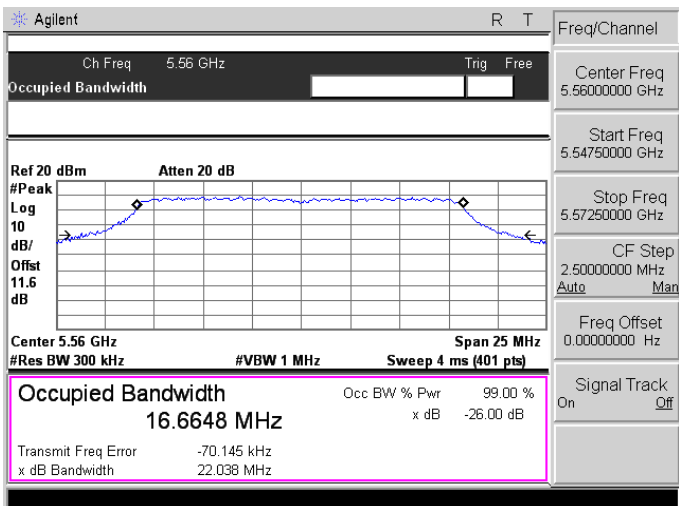
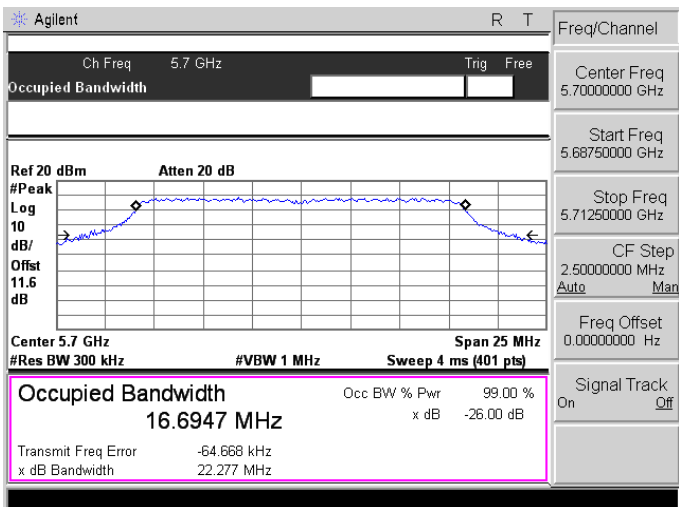
Mode 3: IEEE 802.11n 5GHz 20MHz link mode_ANT-1	
5500	 Agilent R T Ch Freq 5.5 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.5 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8320 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -2.885 kHz x dB Bandwidth 22.477 MHz Freq/Channel Center Freq 5.50000000 GHz Start Freq 5.48750000 GHz Stop Freq 5.51250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5560	 Agilent R T Ch Freq 5.56 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.56 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8320 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -8.373 kHz x dB Bandwidth 22.343 MHz Freq/Channel Center Freq 5.56000000 GHz Start Freq 5.54750000 GHz Stop Freq 5.57250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5700	 Agilent R T Ch Freq 5.7 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.7 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.7881 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -13.081 kHz x dB Bandwidth 23.014 MHz Freq/Channel Center Freq 5.70000000 GHz Start Freq 5.68750000 GHz Stop Freq 5.71250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

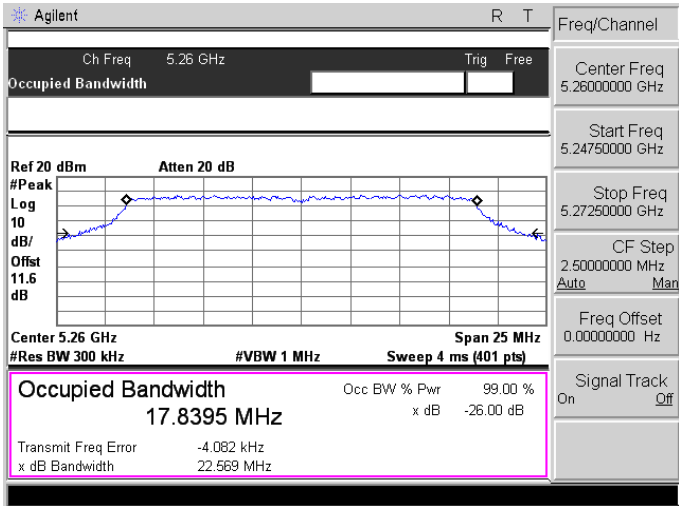
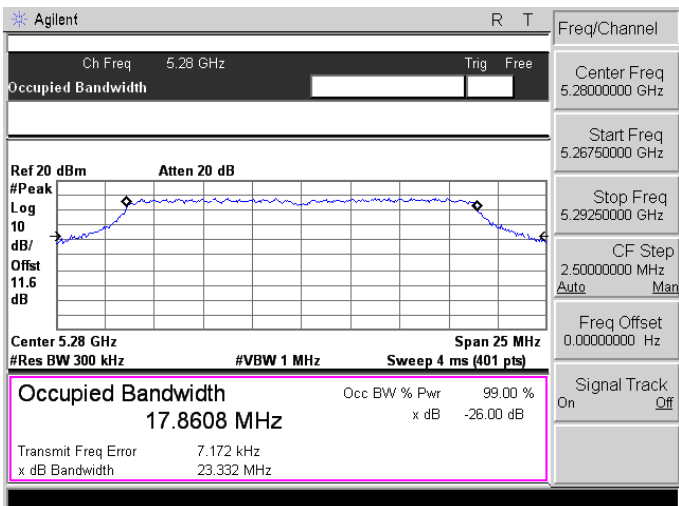
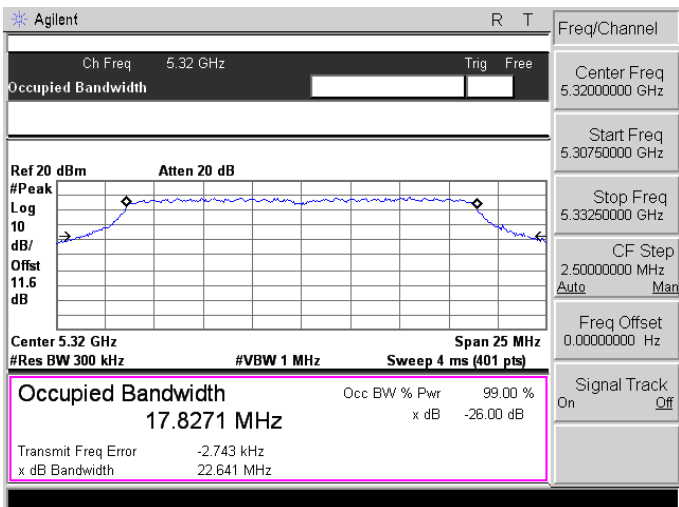
Mode 4: IEEE 802.11n 5GHz 40MHz link mode_ANT-1	
5270	 Agilent R T Ch Freq 5.27 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.27 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.7763 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 66.400 kHz x dB Bandwidth 45.235 MHz Freq/Channel Center Freq 5.27000000 GHz Start Freq 5.24500000 GHz Stop Freq 5.29500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5310	 Agilent R T Ch Freq 5.31 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.31 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.7465 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 136.364 kHz x dB Bandwidth 45.195 MHz Freq/Channel Center Freq 5.31000000 GHz Start Freq 5.28500000 GHz Stop Freq 5.33500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

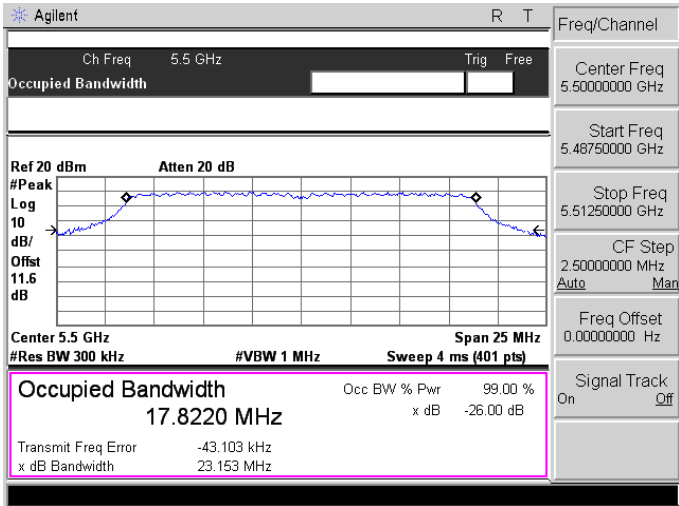
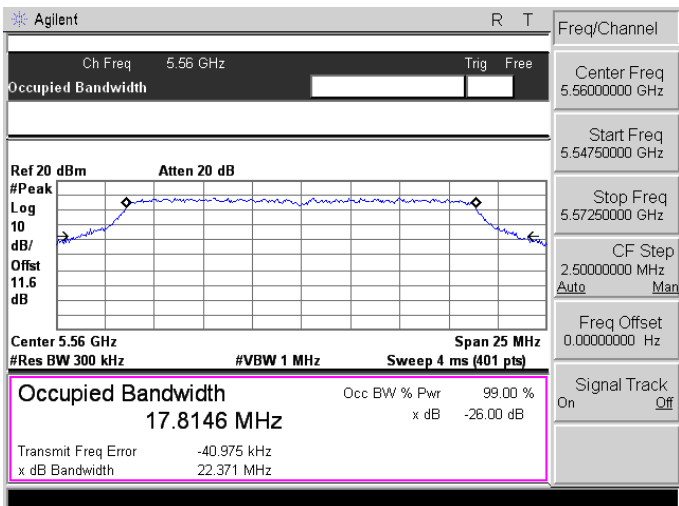
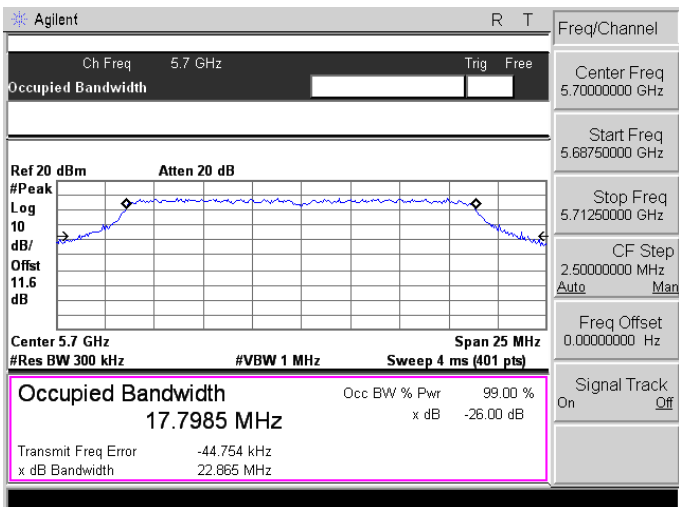
Mode 4: IEEE 802.11n 5GHz 40MHz link mode_ANT-1	
5510	 Agilent R T Ch Freq 5.51 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.51 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.6528 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 58.462 kHz x dB Bandwidth 44.241 MHz Freq/Channel Center Freq 5.51000000 GHz Start Freq 5.48500000 GHz Stop Freq 5.53500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5550	 Agilent R T Ch Freq 5.55 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.55 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.7089 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 11.483 kHz x dB Bandwidth 44.186 MHz Freq/Channel Center Freq 5.55000000 GHz Start Freq 5.52500000 GHz Stop Freq 5.57500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5670	 Agilent R T Ch Freq 5.67 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.67 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.7035 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 35.902 kHz x dB Bandwidth 44.654 MHz Freq/Channel Center Freq 5.67000000 GHz Start Freq 5.64500000 GHz Stop Freq 5.69500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

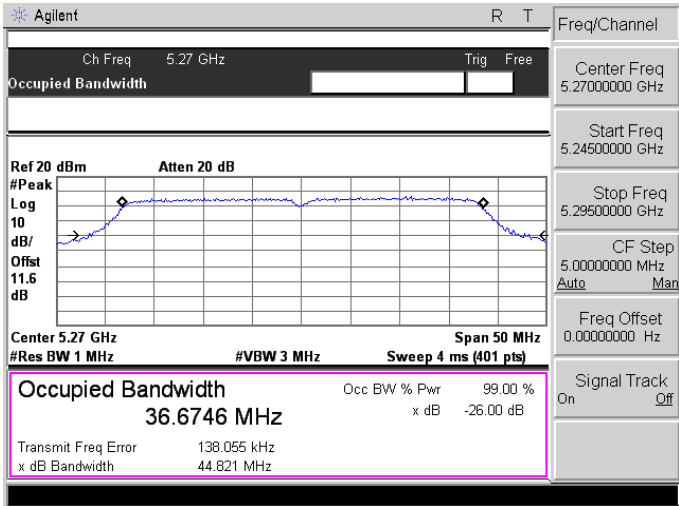
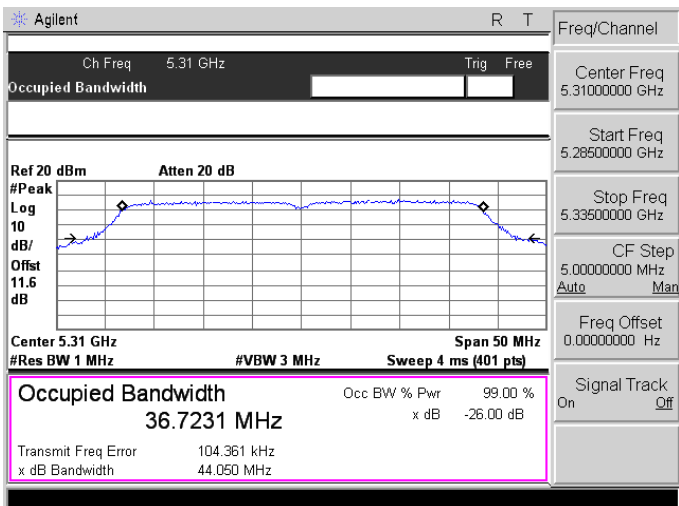
Mode 5: IEEE 802.11ac 80MHz Link Mode_ANT-1	
5290	 Agilent R T Ch Freq 5.29 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ → Offset 11.6 dB Center 5.29 GHz Span 90 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 75.6040 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 63.672 kHz x dB Bandwidth 87.983 MHz Freq/Channel Center Freq 5.29000000 GHz Start Freq 5.24500000 GHz Stop Freq 5.33500000 GHz CF Step 9.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5530	 Agilent R T Ch Freq 5.53 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ → Offset 11.6 dB Center 5.53 GHz Span 90 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 75.7649 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -106.412 kHz x dB Bandwidth 87.248 MHz Freq/Channel Center Freq 5.53000000 GHz Start Freq 5.48500000 GHz Stop Freq 5.57500000 GHz CF Step 9.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5610	 Agilent R T Ch Freq 5.61 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ → Offset 11.6 dB Center 5.61 GHz Span 90 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 75.4807 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -119.306 kHz x dB Bandwidth 85.492 MHz Freq/Channel Center Freq 5.61000000 GHz Start Freq 5.56500000 GHz Stop Freq 5.65500000 GHz CF Step 9.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

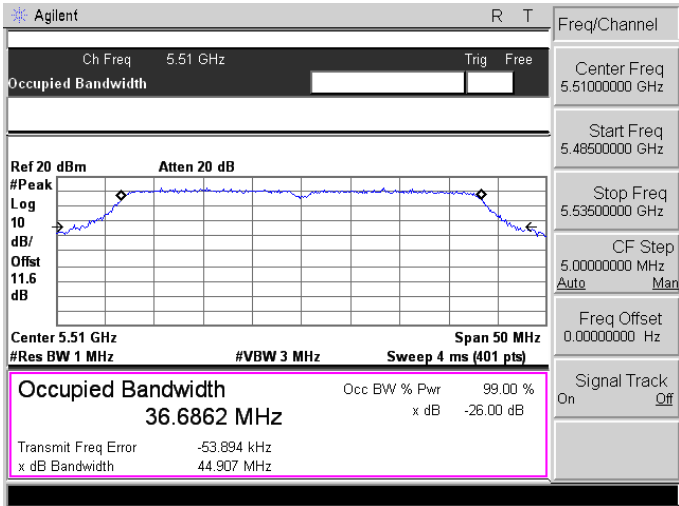
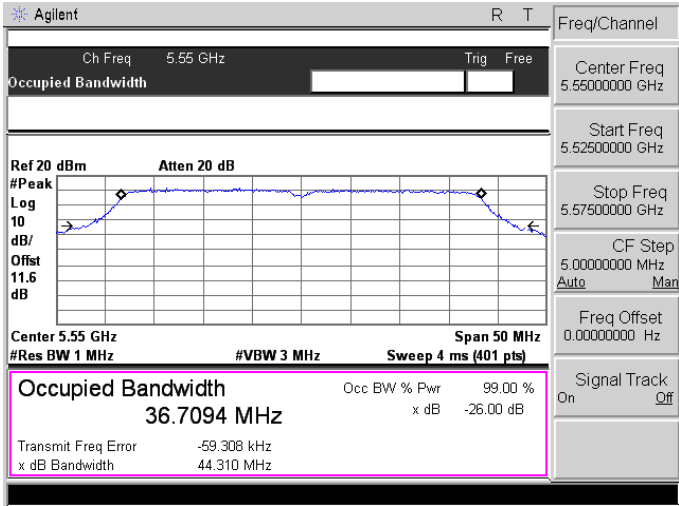
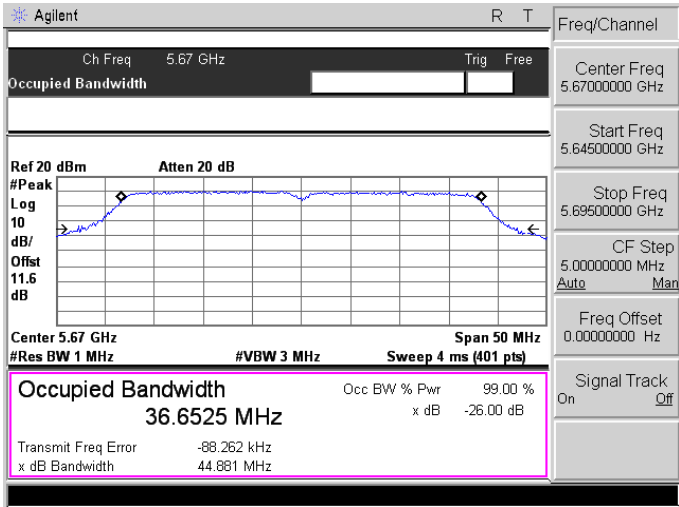
Mode 2: IEEE 802.11a Link Mode_ANT-2	
5260	Agilent R T Ch Freq 5.26 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.26 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.6898 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -12.445 kHz x dB Bandwidth 22.080 MHz Freq/Channel Center Freq 5.26000000 GHz Start Freq 5.24750000 GHz Stop Freq 5.27250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5280	Agilent R T Ch Freq 5.28 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.28 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.6366 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -62.599 kHz x dB Bandwidth 21.307 MHz Freq/Channel Center Freq 5.28000000 GHz Start Freq 5.26750000 GHz Stop Freq 5.29250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5320	Agilent R T Ch Freq 5.32 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.32 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.5787 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 55.288 kHz x dB Bandwidth 21.339 MHz Freq/Channel Center Freq 5.32000000 GHz Start Freq 5.30750000 GHz Stop Freq 5.33250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

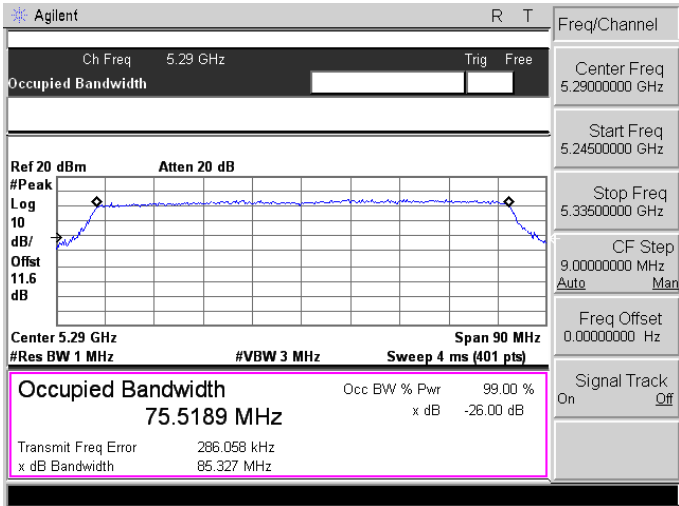
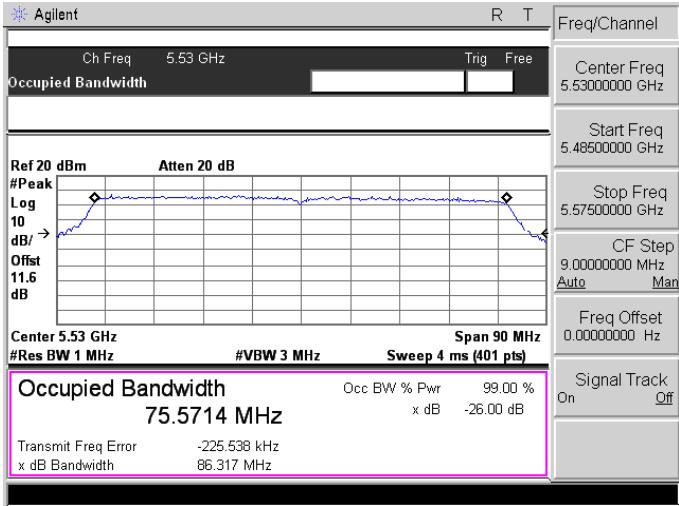
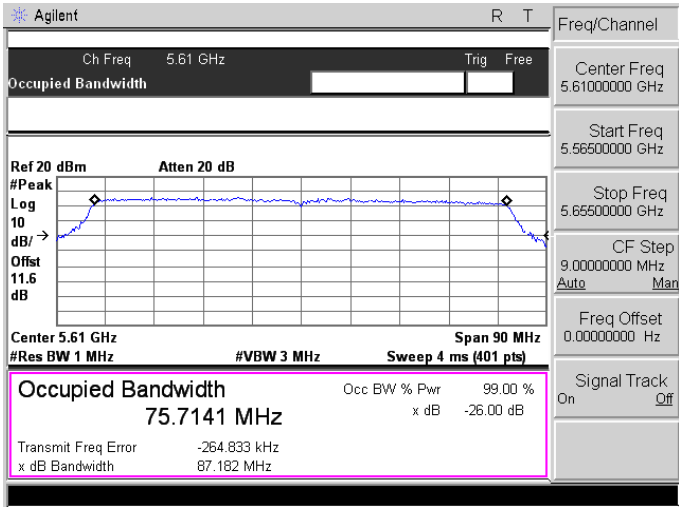
Mode 2: IEEE 802.11a Link Mode_ANT-2	
5500	 Agilent R T Ch Freq 5.5 GHz Tng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.5 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.6935 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -27.481 kHz x dB Bandwidth 22.158 MHz Freq/Channel Center Freq 5.5000000 GHz Start Freq 5.48750000 GHz Stop Freq 5.51250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5560	 Agilent R T Ch Freq 5.56 GHz Tng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.56 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.6648 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -70.145 kHz x dB Bandwidth 22.038 MHz Freq/Channel Center Freq 5.5600000 GHz Start Freq 5.54750000 GHz Stop Freq 5.57250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5700	 Agilent R T Ch Freq 5.7 GHz Tng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.7 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.6947 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -64.668 kHz x dB Bandwidth 22.277 MHz Freq/Channel Center Freq 5.7000000 GHz Start Freq 5.68750000 GHz Stop Freq 5.71250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 3: IEEE 802.11n 5GHz 20MHz link mode_ANT-2	
5260	 Agilent R T Ch Freq 5.26 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.26 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8395 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -4.082 kHz x dB Bandwidth 22.569 MHz Freq/Channel Center Freq 5.26000000 GHz Start Freq 5.24750000 GHz Stop Freq 5.27250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5280	 Agilent R T Ch Freq 5.28 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.28 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8608 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 7.172 kHz x dB Bandwidth 23.332 MHz Freq/Channel Center Freq 5.28000000 GHz Start Freq 5.26750000 GHz Stop Freq 5.29250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5320	 Agilent R T Ch Freq 5.32 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.32 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8271 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -2.743 kHz x dB Bandwidth 22.641 MHz Freq/Channel Center Freq 5.32000000 GHz Start Freq 5.30750000 GHz Stop Freq 5.33250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 3: IEEE 802.11n 5GHz 20MHz link mode_ANT-2	
5500	 Agilent R T Ch Freq 5.5 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.5 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8220 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -43.103 kHz x dB Bandwidth 23.153 MHz Freq/Channel Center Freq 5.50000000 GHz Start Freq 5.48750000 GHz Stop Freq 5.51250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5560	 Agilent R T Ch Freq 5.56 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.56 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.8146 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -40.975 kHz x dB Bandwidth 22.371 MHz Freq/Channel Center Freq 5.56000000 GHz Start Freq 5.54750000 GHz Stop Freq 5.57250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5700	 Agilent R T Ch Freq 5.7 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.7 GHz Span 25 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.7985 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -44.754 kHz x dB Bandwidth 22.865 MHz Freq/Channel Center Freq 5.70000000 GHz Start Freq 5.68750000 GHz Stop Freq 5.71250000 GHz CF Step 2.50000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 4: IEEE 802.11n 5GHz 40MHz link mode_ANT-2	
5270	 Agilent R T Ch Freq 5.27 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.27 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.6746 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 138.055 kHz x dB Bandwidth 44.821 MHz Freq/Channel Center Freq 5.27000000 GHz Start Freq 5.24500000 GHz Stop Freq 5.29500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5310	 Agilent R T Ch Freq 5.31 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.31 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.7231 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 104.361 kHz x dB Bandwidth 44.050 MHz Freq/Channel Center Freq 5.31000000 GHz Start Freq 5.28500000 GHz Stop Freq 5.33500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 4: IEEE 802.11n 5GHz 40MHz link mode_ANT-2	
5510	 Agilent R T Ch Freq 5.51 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.51 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.6862 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -53.894 kHz x dB Bandwidth 44.907 MHz Freq/Channel Center Freq 5.51000000 GHz Start Freq 5.48500000 GHz Stop Freq 5.53500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5550	 Agilent R T Ch Freq 5.55 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.55 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.7094 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -59.308 kHz x dB Bandwidth 44.310 MHz Freq/Channel Center Freq 5.55000000 GHz Start Freq 5.52500000 GHz Stop Freq 5.57500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5670	 Agilent R T Ch Freq 5.67 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/ Offset 11.6 dB Center 5.67 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.6525 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -88.262 kHz x dB Bandwidth 44.881 MHz Freq/Channel Center Freq 5.67000000 GHz Start Freq 5.64500000 GHz Stop Freq 5.69500000 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	
5290	 Agilent R T Ch Freq 5.29 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.29 GHz Span 90 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 75.5189 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 286.058 kHz x dB Bandwidth 85.327 MHz Freq/Channel Center Freq 5.29000000 GHz Start Freq 5.24500000 GHz Stop Freq 5.33500000 GHz CF Step 9.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5530	 Agilent R T Ch Freq 5.53 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.53 GHz Span 90 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 75.5714 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -225.538 kHz x dB Bandwidth 86.317 MHz Freq/Channel Center Freq 5.53000000 GHz Start Freq 5.48500000 GHz Stop Freq 5.57500000 GHz CF Step 9.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5610	 Agilent R T Ch Freq 5.61 GHz Trng Free Occupied Bandwidth Ref 20 dBm Atten 20 dB #Peak Log 10 dB/Offset 11.6 dB Center 5.61 GHz Span 90 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 75.7141 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -264.833 kHz x dB Bandwidth 87.182 MHz Freq/Channel Center Freq 5.61000000 GHz Start Freq 5.56500000 GHz Stop Freq 5.65500000 GHz CF Step 9.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

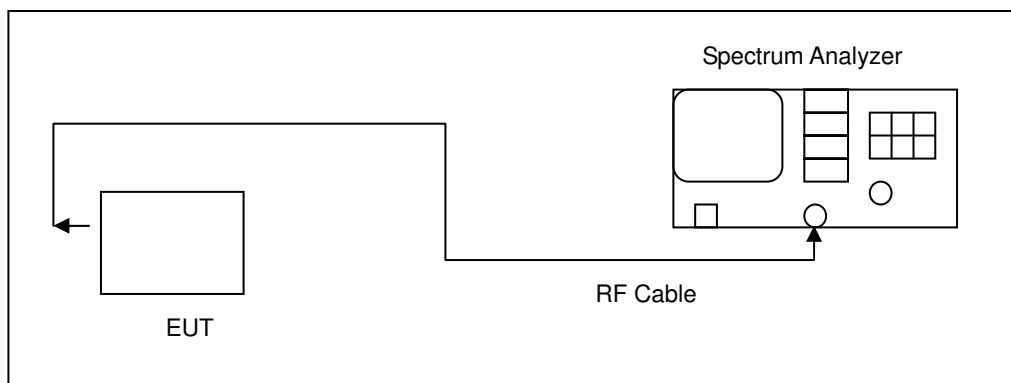
4.4. Peak Power Spectral Density Measurement

■ Limit

Conducted power spectral density

Frequency Range	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

■ Test Setup



■ Test Instruments

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

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

■ 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.

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	07/15/2015				
Frequency (MHz)	Measurement (dBm/MHz)				FCC Limit (dBm/MHz)
	ANT-0	ANT-1	ANT-2	ANT-0+1+2	
5260	4.259	4.088	3.803	8.980	< 11
5280	4.371	4.094	3.394	8.898	
5320	4.985	4.586	3.883	9.435	
5500	5.967	5.743	5.555	10.685	< 11
5560	5.370	5.077	5.055	10.096	
5700	4.819	4.187	3.832	9.225	

Model Number	UAP-AC-PRO				
Test Item	Conducted power spectral density				
Test Mode	Mode 3: IEEE 802.11n 5GHz 20MHz link mode				
Date of Test	07/15/2015				
Frequency (MHz)	Measurement (dBm/MHz)				FCC Limit (dBm/MHz)
	ANT-0	ANT-1	ANT-2	ANT-0+1+2	
5260	3.110	3.000	1.889	7.793	< 11
5280	3.400	3.183	2.362	8.097	
5320	3.999	3.833	2.731	8.649	
5500	4.845	4.737	4.502	9.790	< 11
5560	4.497	4.351	3.818	9.325	
5700	3.832	3.702	3.666	8.827	

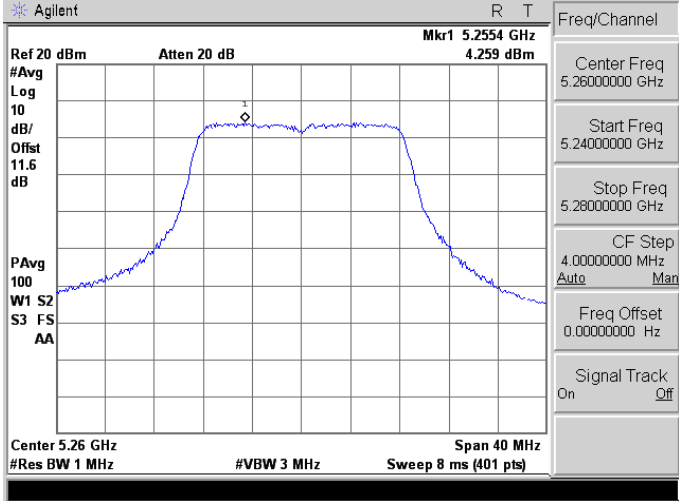
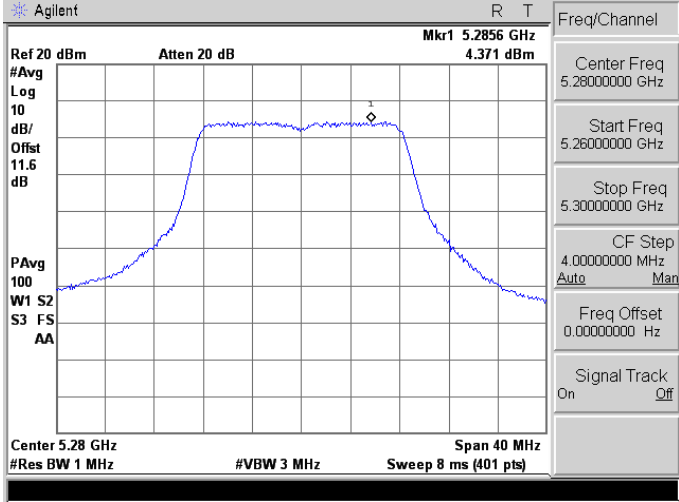
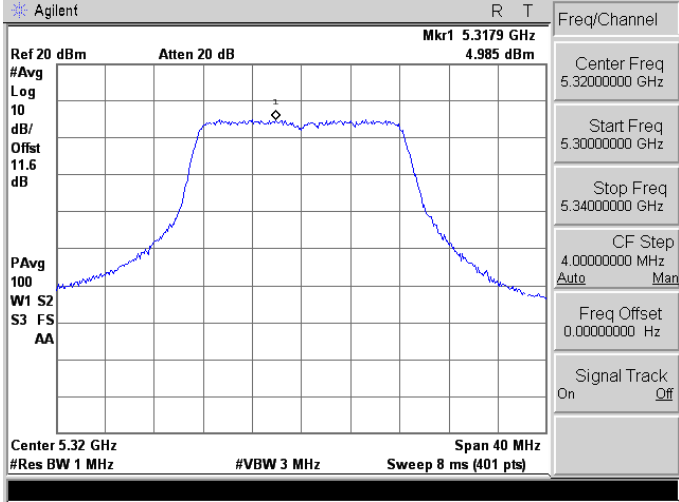
Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) = measured result + duty factor.

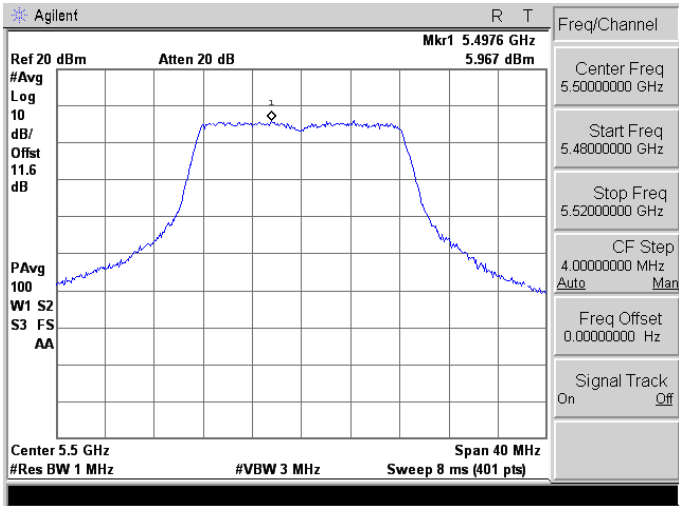
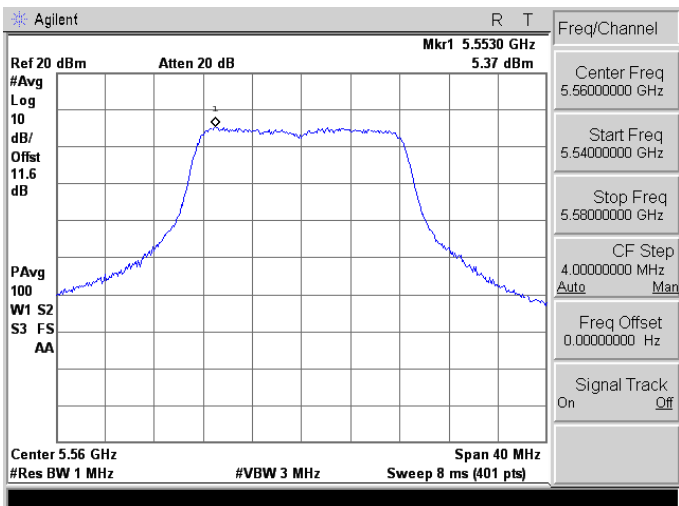
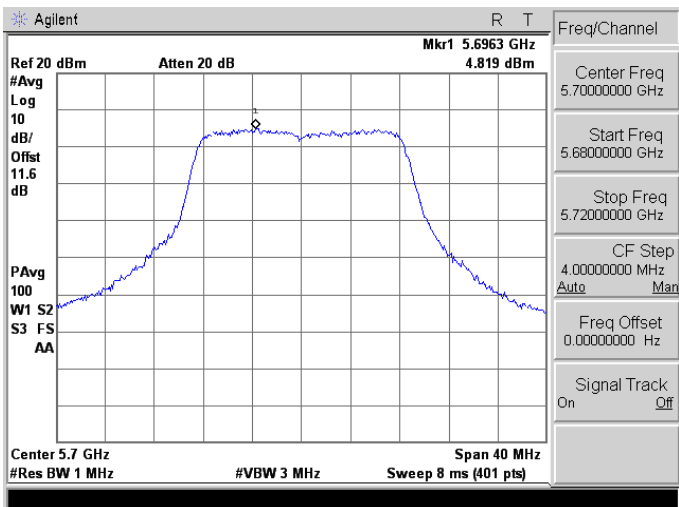
Model Number	UAP-AC-PRO				
Test Item	Conducted power spectral density				
Test Mode	Mode 4: IEEE 802.11n 5GHz 40MHz link mode				
Date of Test	07/15/2015				
Frequency (MHz)	Measurement (dBm/MHz)				FCC Limit (dBm/MHz)
	ANT-0	ANT-1	ANT-2	ANT-0+1+2	
5270	-3.256	-3.910	-4.070	1.766	< 11
5310	-2.697	-3.702	-4.099	2.038	
5510	1.283	1.075	0.770	6.544	< 11
5590	0.769	0.768	0.490	6.174	
5670	0.099	-0.160	-0.532	5.307	

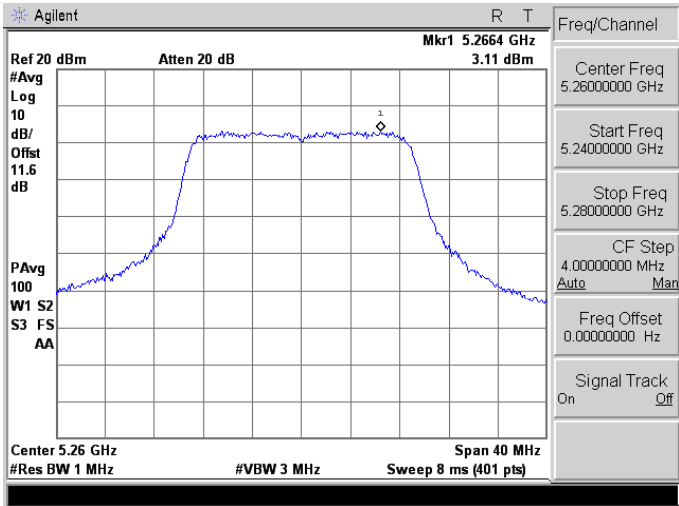
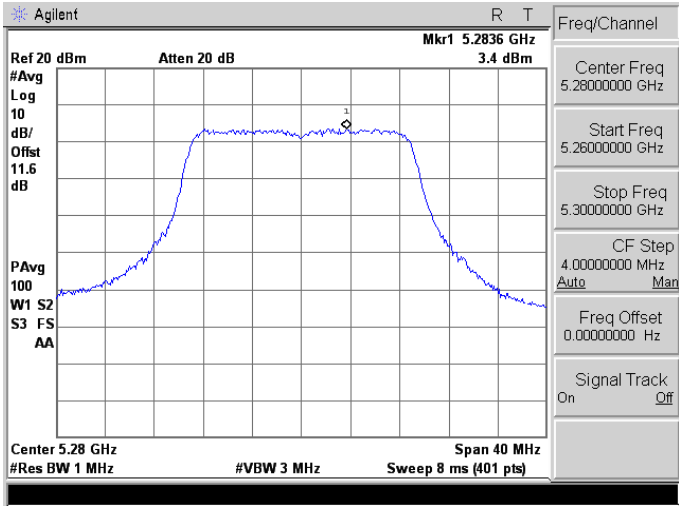
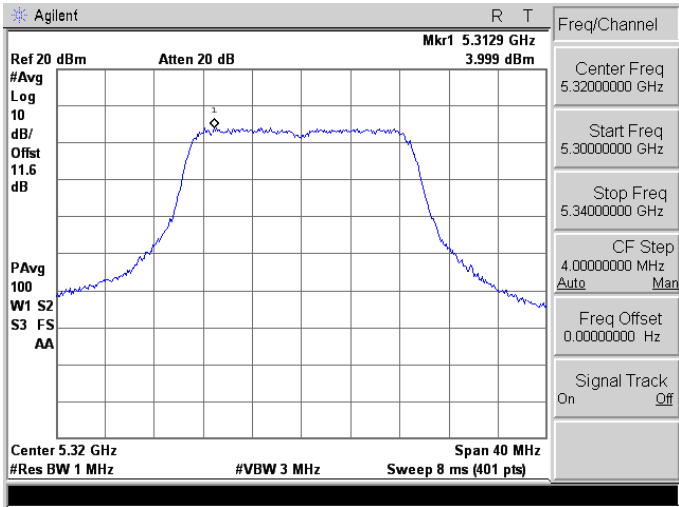
Model Number	UAP-AC-PRO				
Test Item	Conducted power spectral density				
Test Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode				
Date of Test	07/15/2015				
Frequency (MHz)	Measurement (dBm/MHz)				FCC Limit (dBm/MHz)
	ANT-0	ANT-1	ANT-2	ANT-0+1+2	
5290	-5.201	-5.554	-5.713	-0.113	< 11
5530	-3.839	-4.054	-4.445	1.266	
5610	-4.677	-4.743	-5.108	0.533	< 11

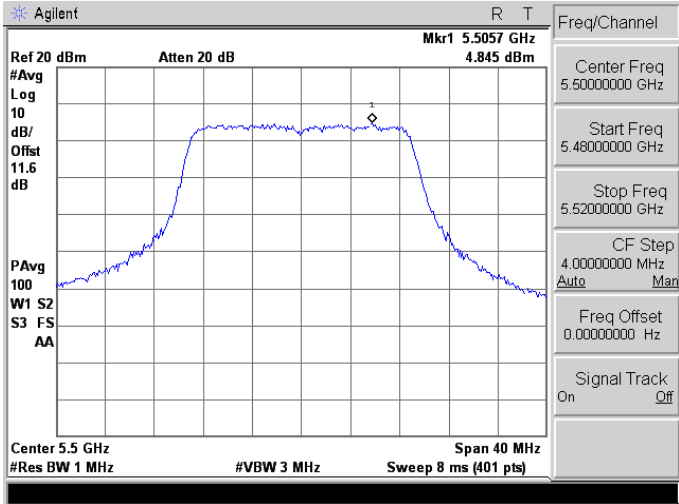
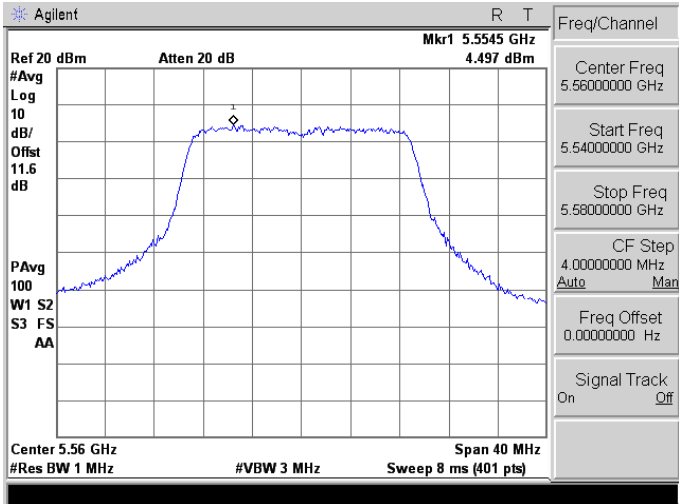
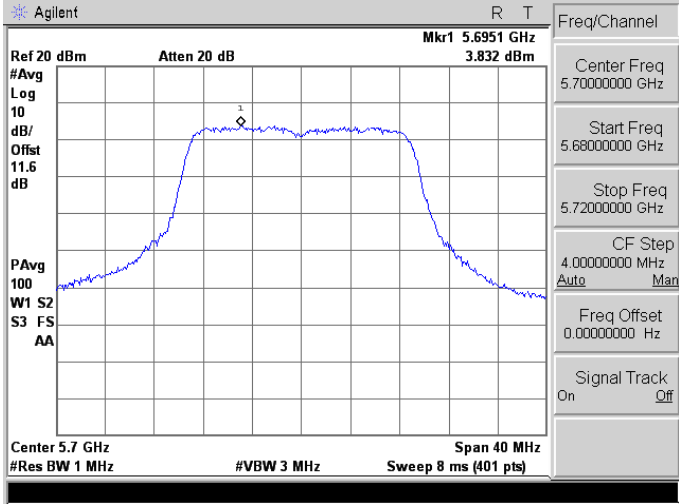
Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) = measured result + duty factor.

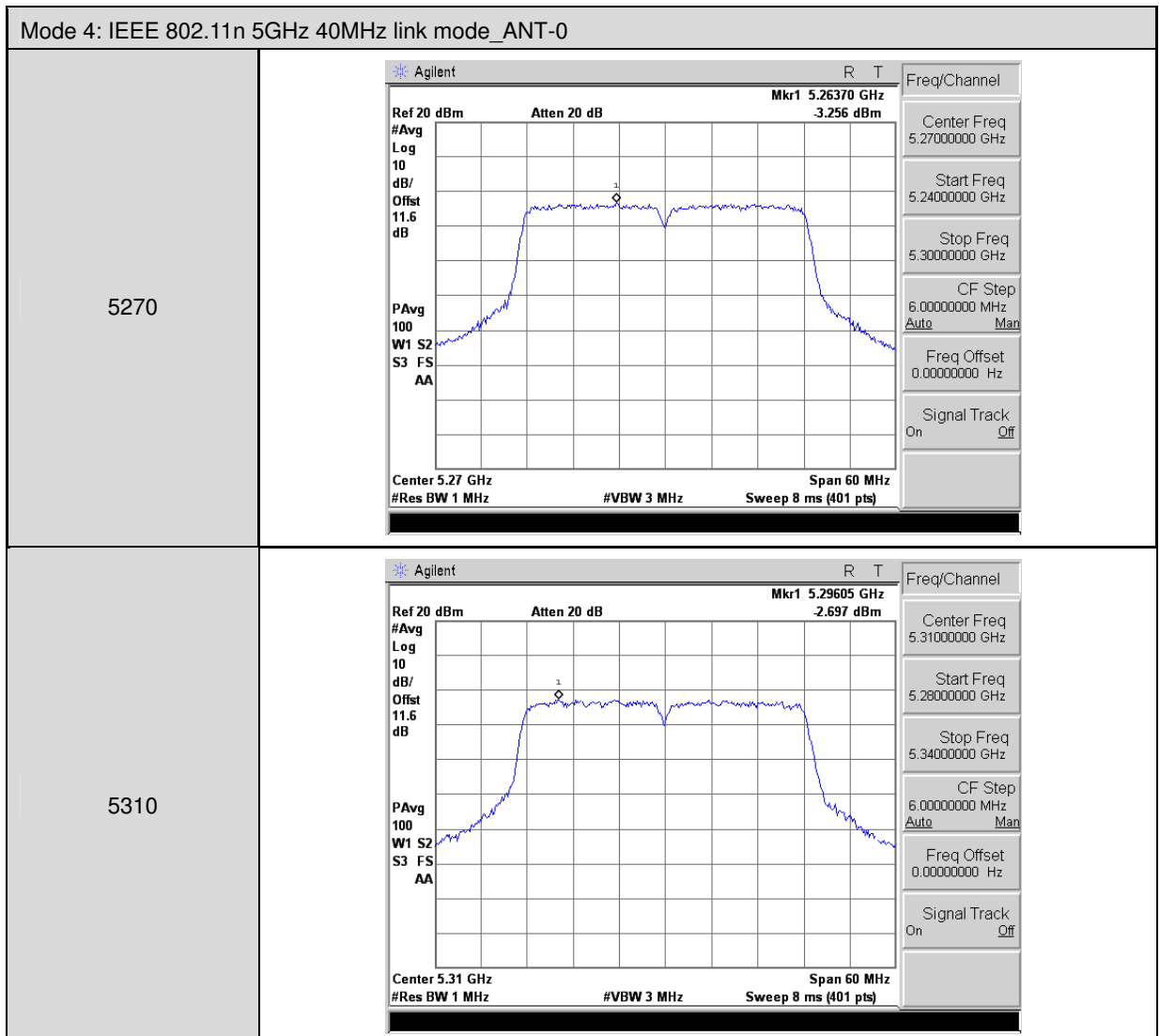
■ Test Graphs

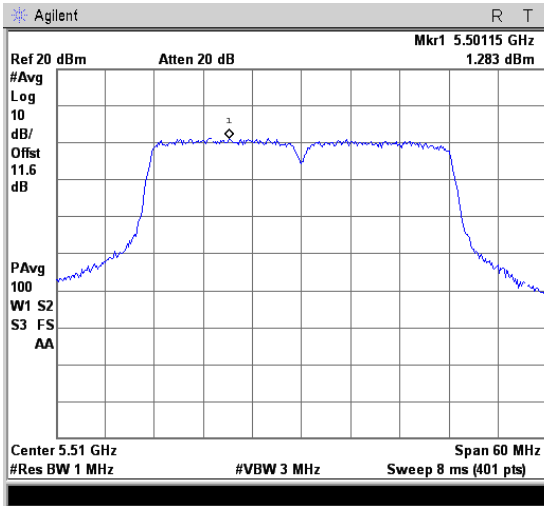
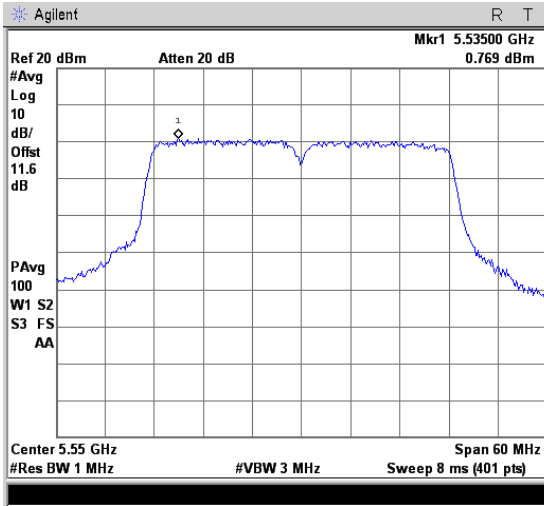
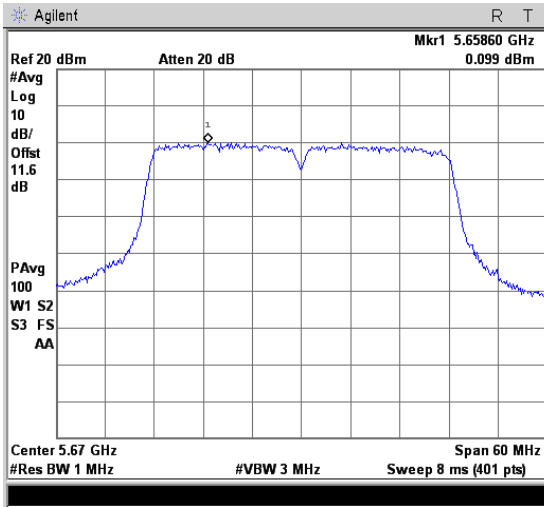
Mode 2: IEEE 802.11a Link Mode_ANT-0 5260	
5280	
5320	

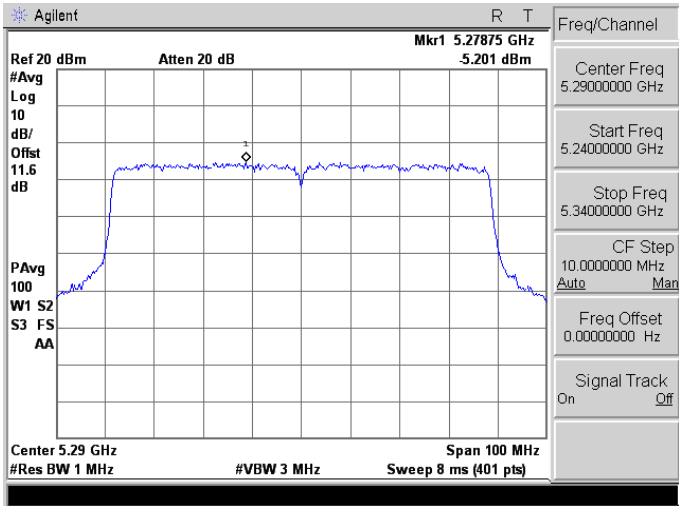
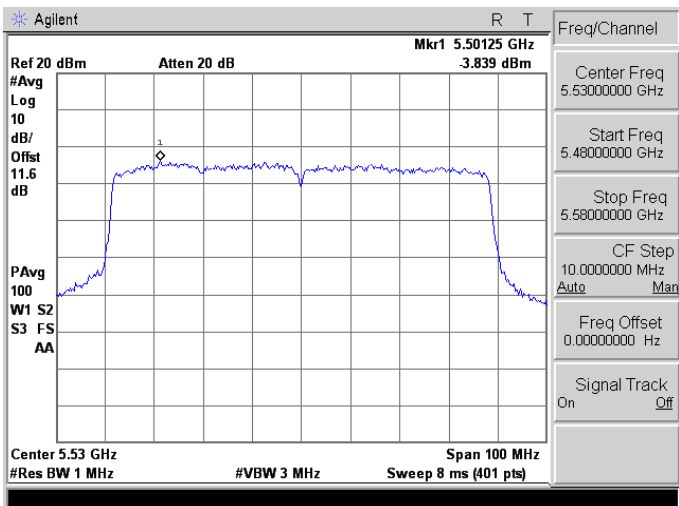
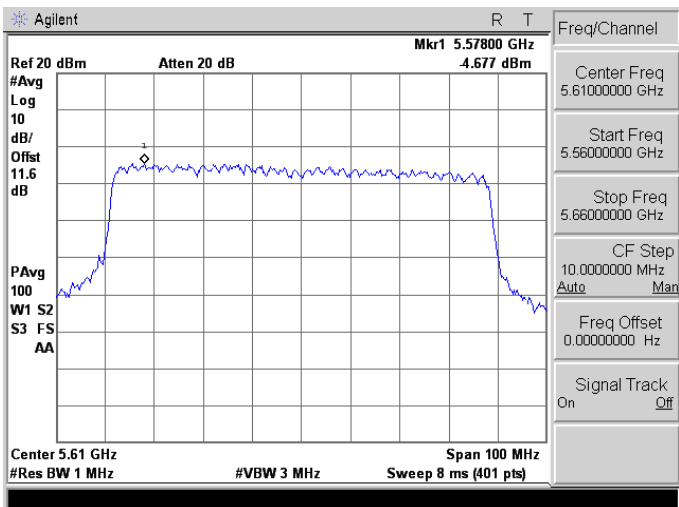
Mode 2: IEEE 802.11a Link Mode_ANT-0	
5500	
5560	
5700	

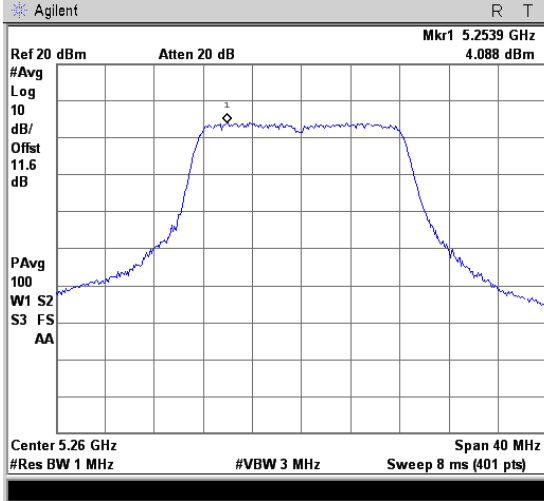
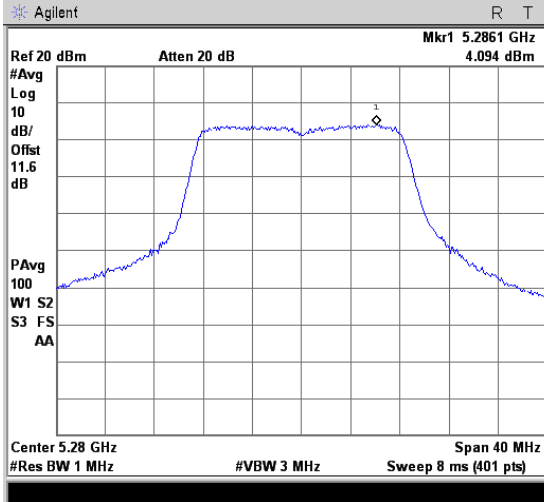
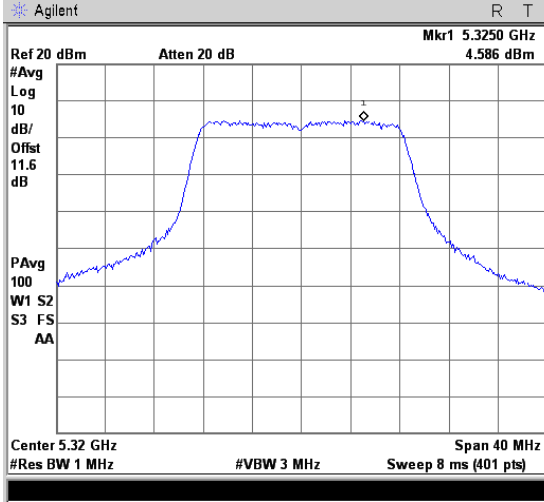
Mode 3: IEEE 802.11n 5GHz 20MHz link mode_ANT-0	
5260	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.2664 GHz 3.11 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.26 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.26000000 GHz Start Freq 5.24000000 GHz Stop Freq 5.28000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5280	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.2836 GHz 3.4 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.28 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.28000000 GHz Start Freq 5.26000000 GHz Stop Freq 5.30000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5320	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.3129 GHz 3.999 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.32 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.32000000 GHz Start Freq 5.30000000 GHz Stop Freq 5.34000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 3: IEEE 802.11n 5GHz 20MHz link mode_ANT-0	
5500	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.5057 GHz 4.845 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.5 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.50000000 GHz Start Freq 5.48000000 GHz Stop Freq 5.52000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5560	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.5545 GHz 4.497 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.56 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.56000000 GHz Start Freq 5.54000000 GHz Stop Freq 5.58000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5700	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.6951 GHz 3.832 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.7 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.70000000 GHz Start Freq 5.68000000 GHz Stop Freq 5.72000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

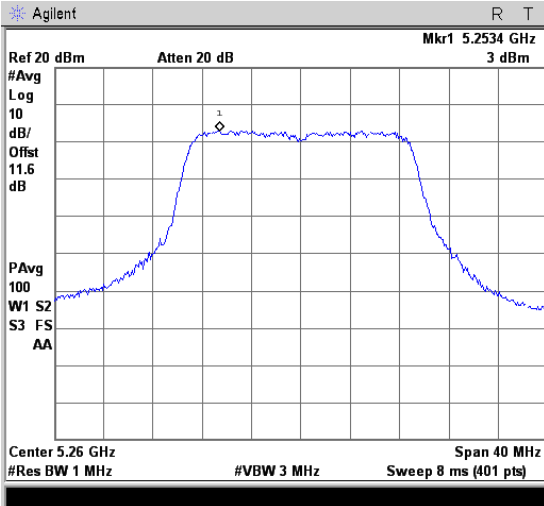
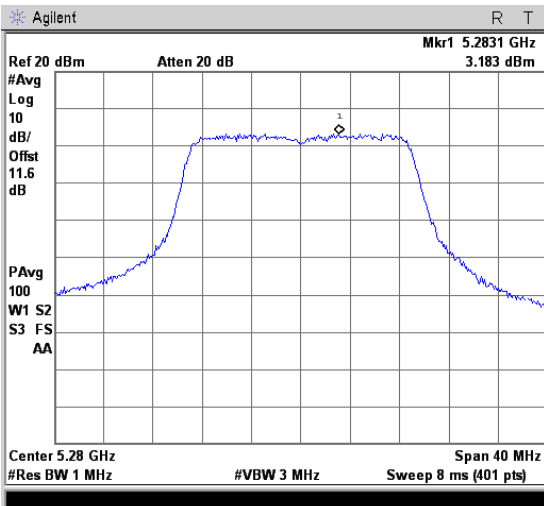
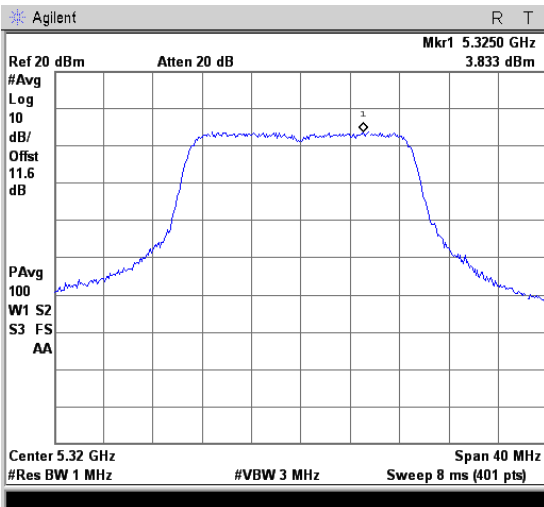


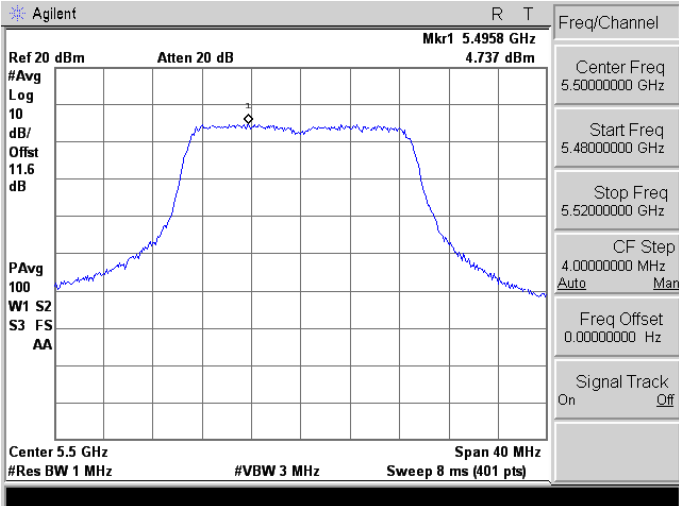
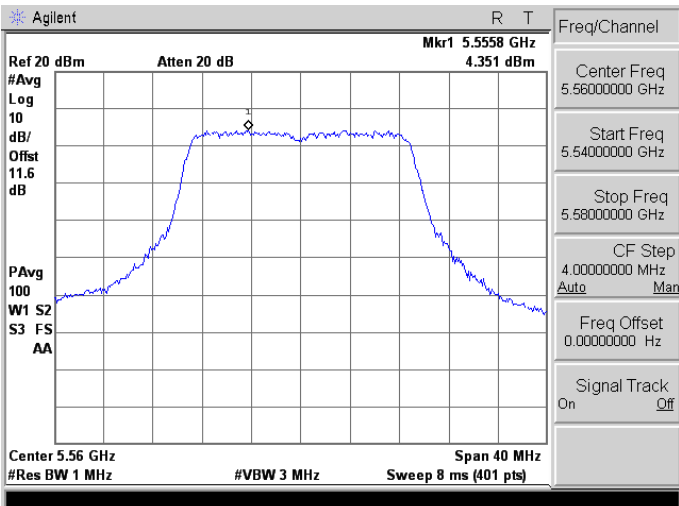
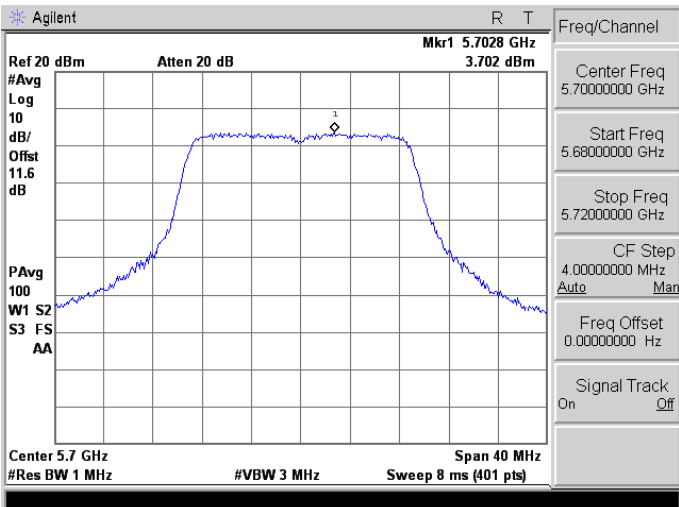
Mode 4: IEEE 802.11n 5GHz 40MHz link mode_ANT-0	
5510	 Agilent R T Ref 20 dBm Mkr1 5.50115 GHz 1.283 dBm Center 5.51 GHz Span 60 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.51000000 GHz Start Freq 5.48000000 GHz Stop Freq 5.54000000 GHz CF Step 6.00000000 MHz Freq Offset 0.00000000 Hz Signal Track On Off
5550	 Agilent R T Ref 20 dBm Mkr1 5.53500 GHz 0.769 dBm Center 5.55 GHz Span 60 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.55000000 GHz Start Freq 5.52000000 GHz Stop Freq 5.58000000 GHz CF Step 6.00000000 MHz Freq Offset 0.00000000 Hz Signal Track On Off
5670	 Agilent R T Ref 20 dBm Mkr1 5.65860 GHz 0.099 dBm Center 5.67 GHz Span 60 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.67000000 GHz Start Freq 5.64000000 GHz Stop Freq 5.70000000 GHz CF Step 6.00000000 MHz Freq Offset 0.00000000 Hz Signal Track On Off

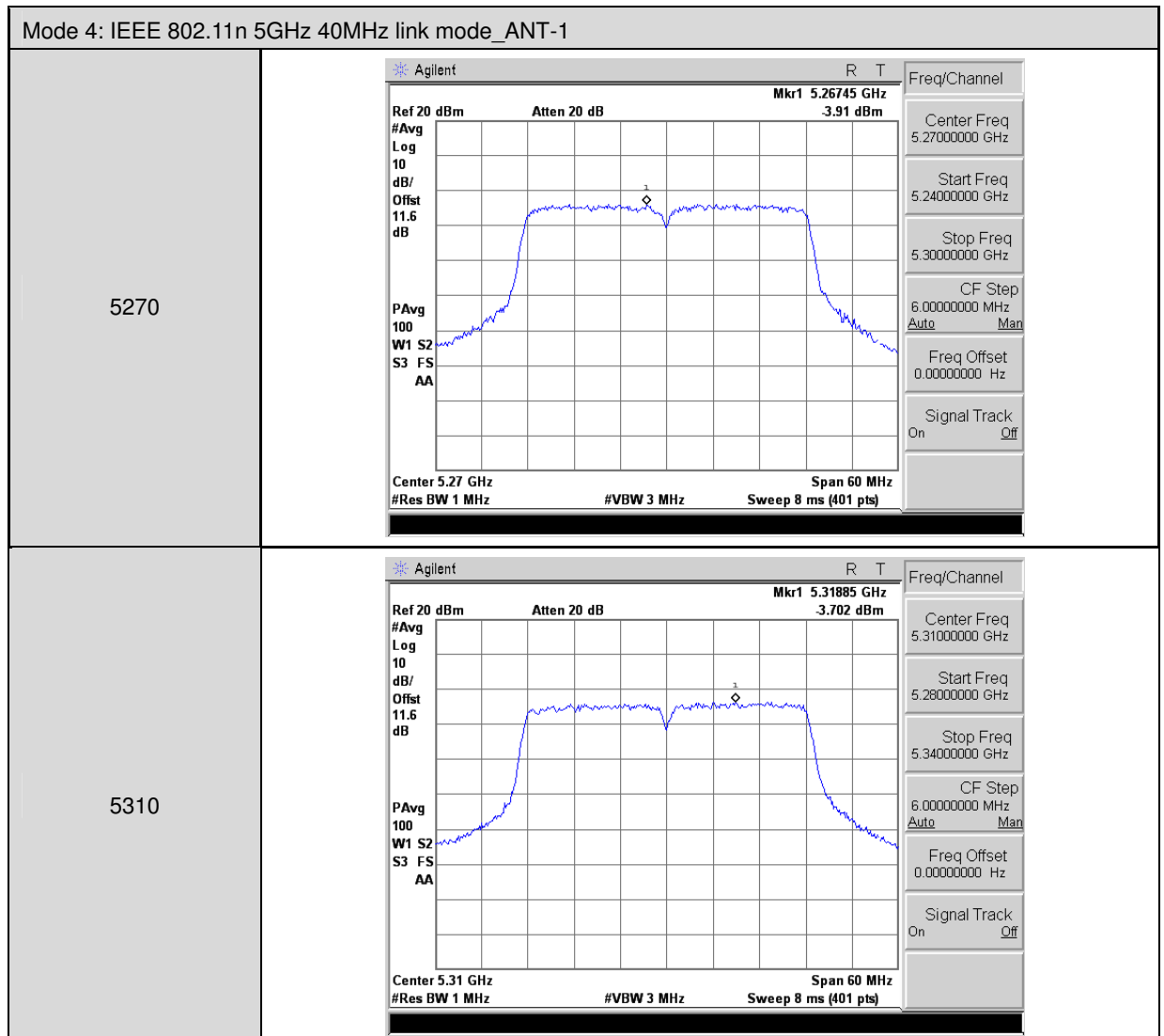
Mode 5: IEEE 802.11ac 80MHz Link Mode_ANT-0	
5290	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.27875 GHz 5.201 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.29 GHz Span 100 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.29000000 GHz Start Freq 5.24000000 GHz Stop Freq 5.34000000 GHz CF Step 10.0000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5530	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.50125 GHz 3.839 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.53 GHz Span 100 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.53000000 GHz Start Freq 5.48000000 GHz Stop Freq 5.58000000 GHz CF Step 10.0000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5610	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.57800 GHz 4.677 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.61 GHz Span 100 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.61000000 GHz Start Freq 5.56000000 GHz Stop Freq 5.66000000 GHz CF Step 10.0000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

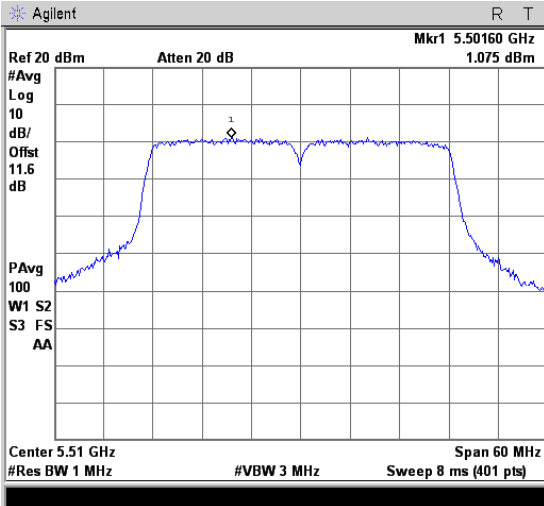
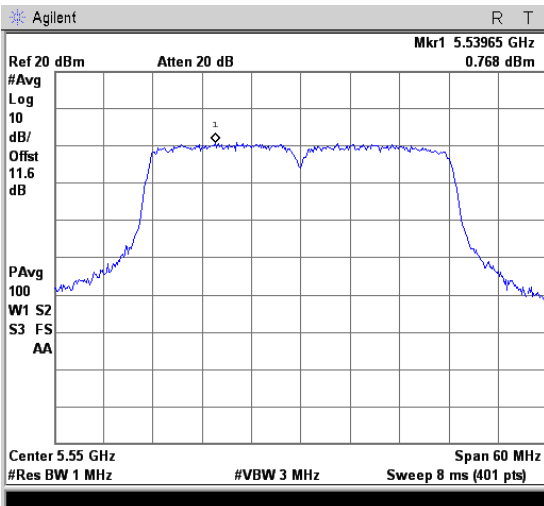
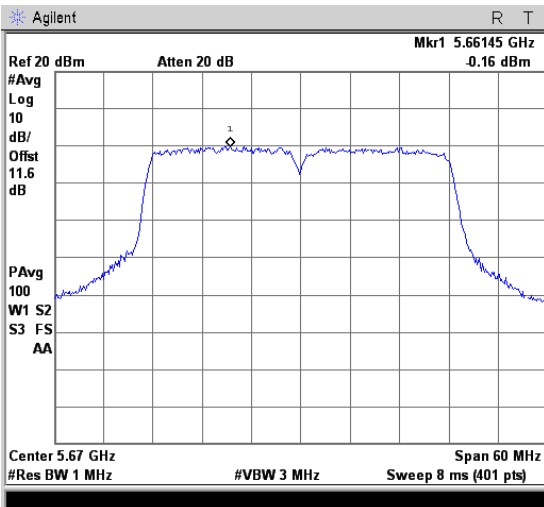
Mode 2: IEEE 802.11a Link Mode_ANT-1	
5260	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.2539 GHz 4.088 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.26 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.26000000 GHz Start Freq 5.24000000 GHz Stop Freq 5.28000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5280	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.2861 GHz 4.094 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.28 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.28000000 GHz Start Freq 5.26000000 GHz Stop Freq 5.30000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5320	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.3250 GHz 4.586 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.32 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.32000000 GHz Start Freq 5.30000000 GHz Stop Freq 5.34000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

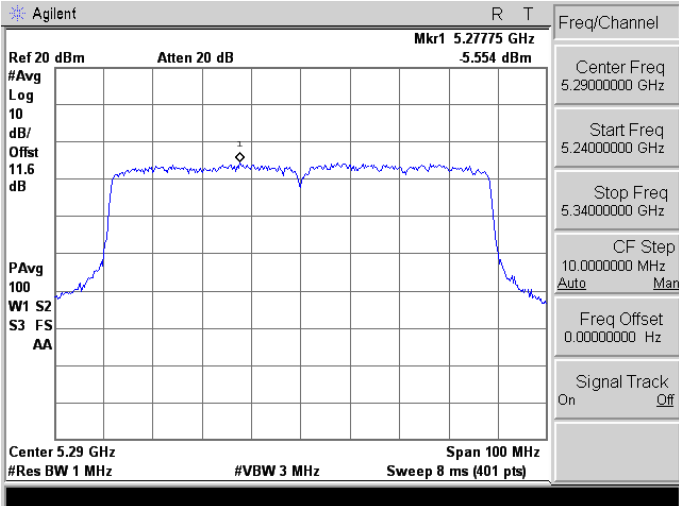
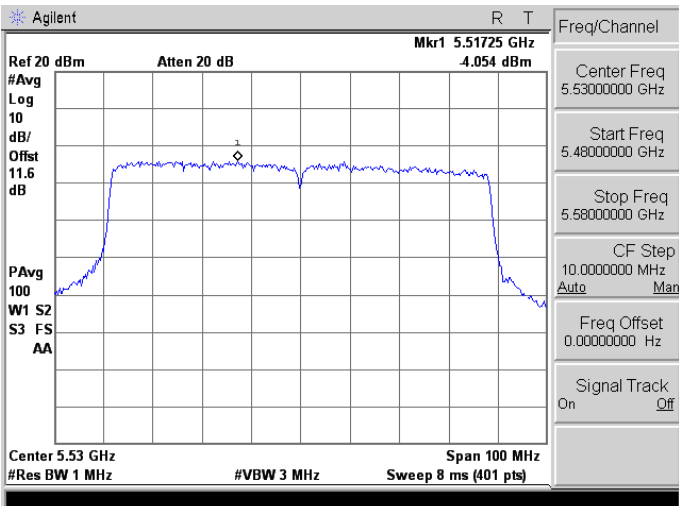
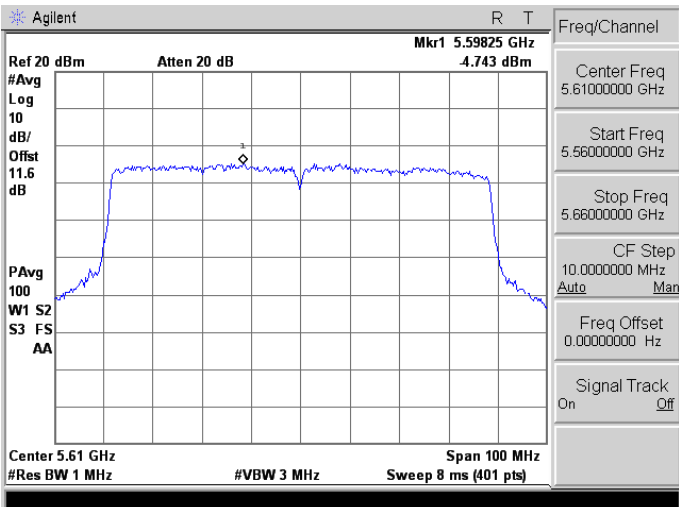
Mode 2: IEEE 802.11a Link Mode_ANT-1	
5500	
5560	
5700	

Mode 3: IEEE 802.11n 5GHz 20MHz link mode_ANT-1	
5260	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.2534 GHz 3 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.26 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.26000000 GHz Start Freq 5.24000000 GHz Stop Freq 5.28000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5280	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.2831 GHz 3.183 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.28 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.28000000 GHz Start Freq 5.26000000 GHz Stop Freq 5.30000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5320	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.3250 GHz 3.833 dBm #Avg Log 10 dB/Offset 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.32 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.32000000 GHz Start Freq 5.30000000 GHz Stop Freq 5.34000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

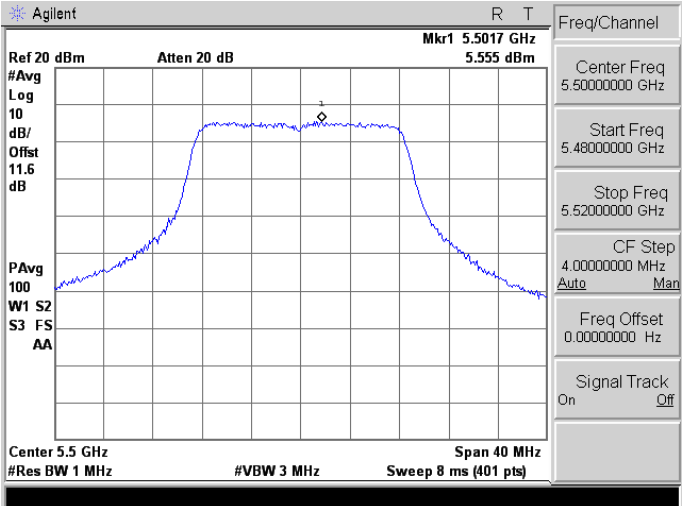
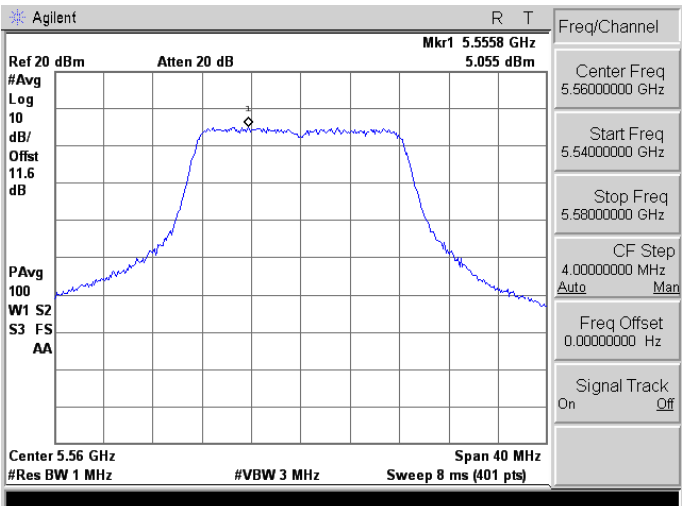
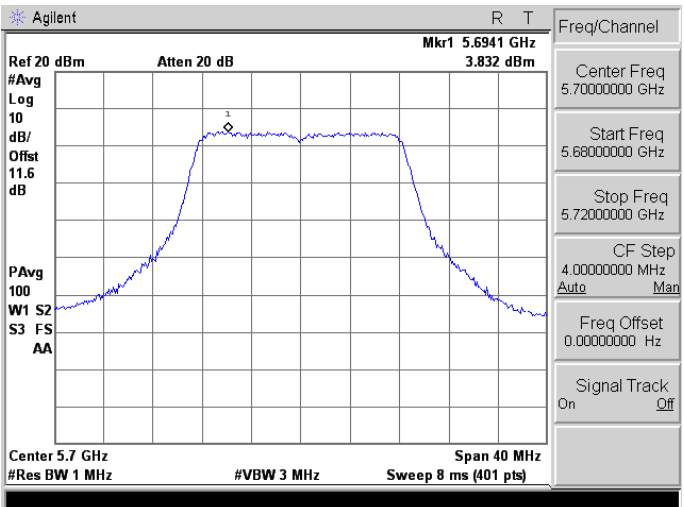
Mode 3: IEEE 802.11n 5GHz 20MHz link mode_ANT-1	
5500	
5560	
5700	

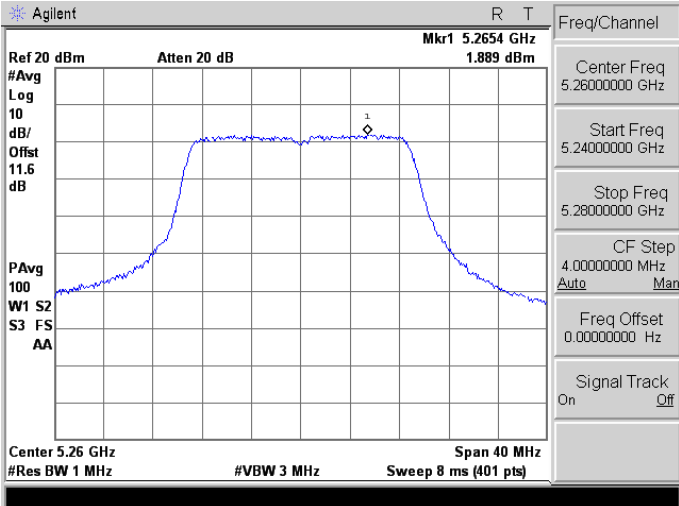
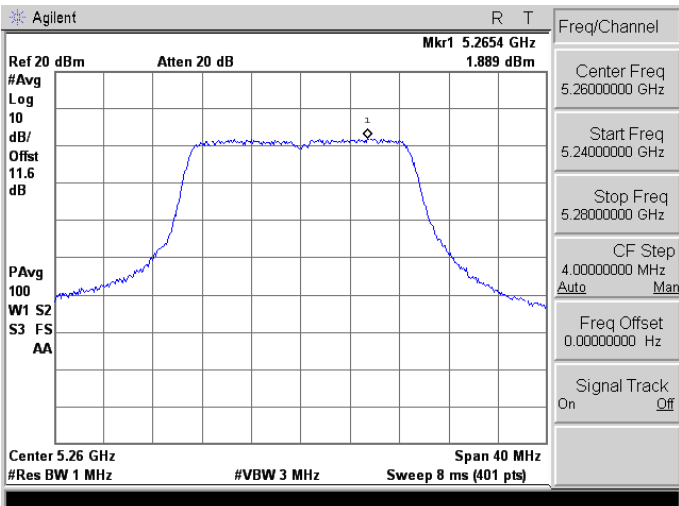
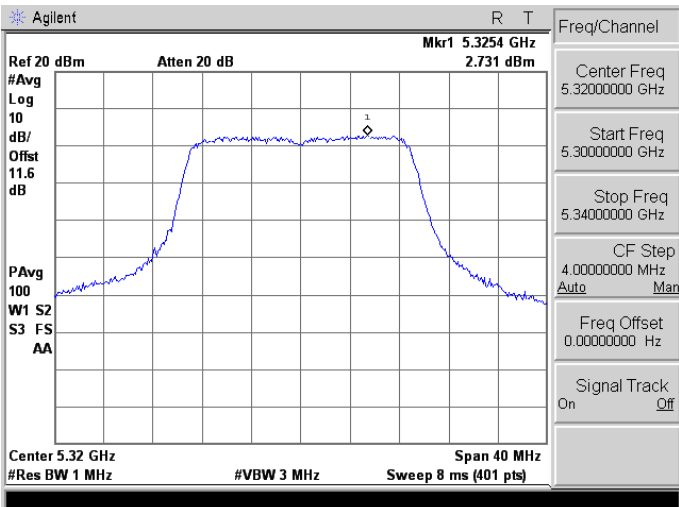


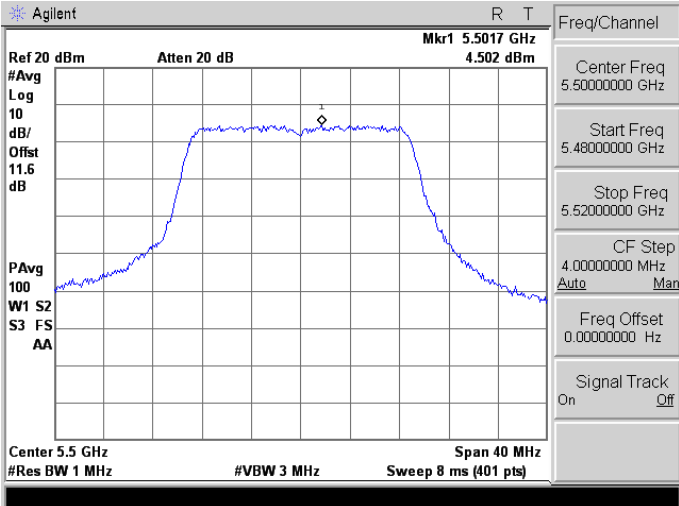
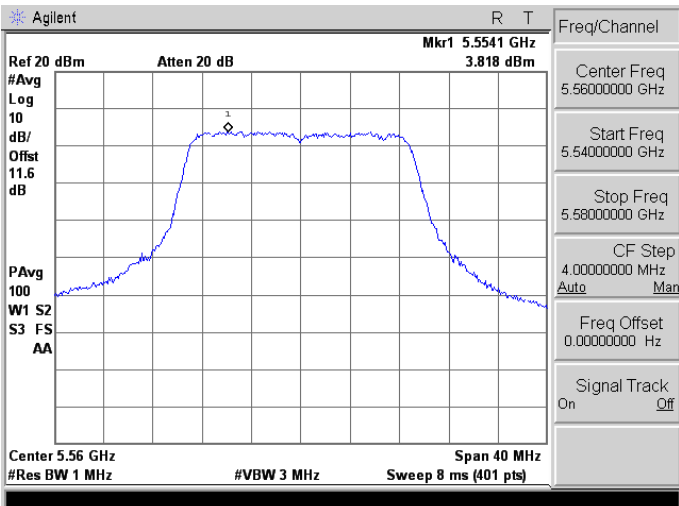
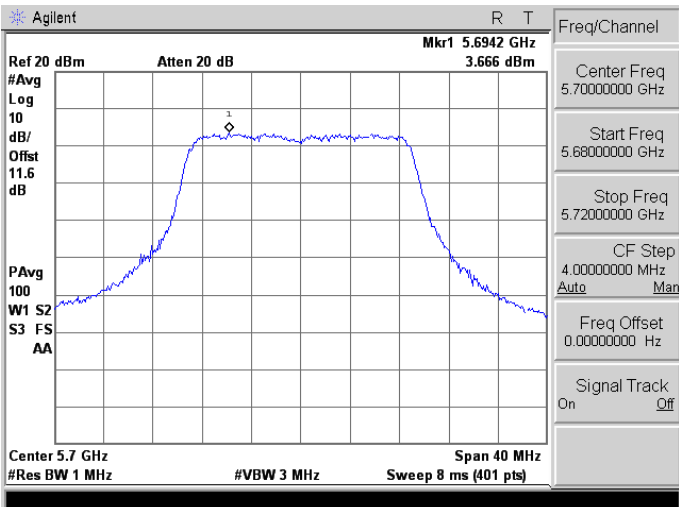
Mode 4: IEEE 802.11n 5GHz 40MHz link mode_ANT-1	
5510	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.50160 GHz 1.075 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.51 GHz #Res BW 1 MHz Span 60 MHz Sweep 8 ms (401 pts) #VBW 3 MHz Freq/Channel Center Freq 5.51000000 GHz Start Freq 5.48000000 GHz Stop Freq 5.54000000 GHz CF Step 6.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5550	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.53965 GHz 0.768 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.55 GHz #Res BW 1 MHz Span 60 MHz Sweep 8 ms (401 pts) #VBW 3 MHz Freq/Channel Center Freq 5.55000000 GHz Start Freq 5.52000000 GHz Stop Freq 5.58000000 GHz CF Step 6.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5670	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.66145 GHz -0.16 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.67 GHz #Res BW 1 MHz Span 60 MHz Sweep 8 ms (401 pts) #VBW 3 MHz Freq/Channel Center Freq 5.67000000 GHz Start Freq 5.64000000 GHz Stop Freq 5.70000000 GHz CF Step 6.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

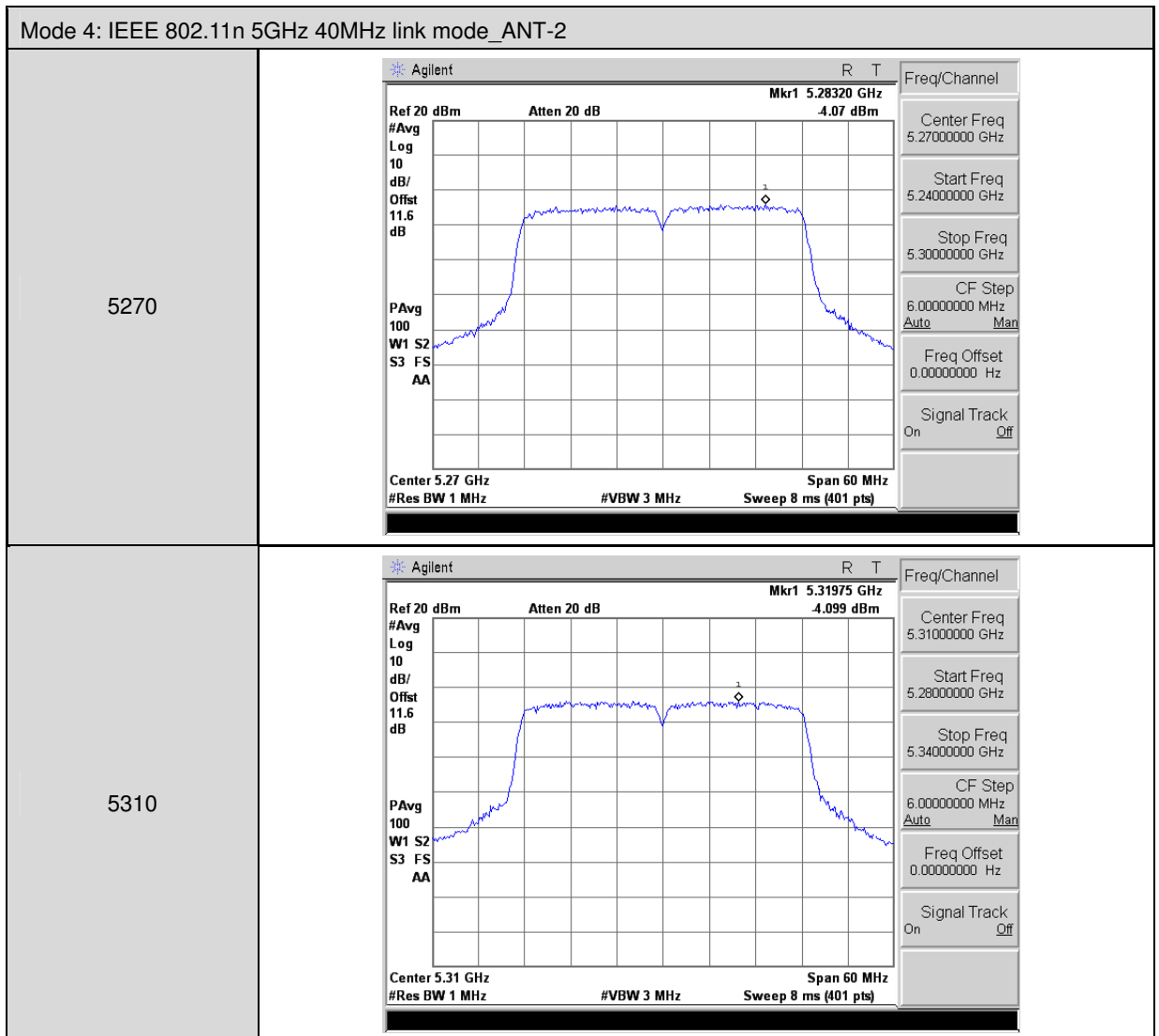
Mode 5: IEEE 802.11ac 80MHz Link Mode_ANT-1	
5290	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.27775 GHz 5.554 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.29 GHz Span 100 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.29000000 GHz Start Freq 5.24000000 GHz Stop Freq 5.34000000 GHz CF Step 10.0000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5530	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.51725 GHz 4.054 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.53 GHz Span 100 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.53000000 GHz Start Freq 5.48000000 GHz Stop Freq 5.58000000 GHz CF Step 10.0000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5610	 Agilent R T Ref 20 dBm Atten 20 dB Mkr1 5.59825 GHz 4.743 dBm #Avg Log 10 dB/ Offst 11.6 dB PAvg 100 W1 S2 S3 FS AA Center 5.61 GHz Span 100 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.61000000 GHz Start Freq 5.56000000 GHz Stop Freq 5.66000000 GHz CF Step 10.0000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 2: IEEE 802.11a Link Mode_ANT-2	
5260	
5280	
5320	

Mode 2: IEEE 802.11a Link Mode_ANT-2	
5500	
5560	
5700	

Mode 3: IEEE 802.11n 5GHz 20MHz link mode_ANT-2	
5260	
5280	
5320	

Mode 3: IEEE 802.11n 5GHz 20MHz link mode_ANT-2	
5500	
5560	
5700	



Mode 4: IEEE 802.11n 5GHz 40MHz link mode_ANT-2	
5510	
5550	
5670	

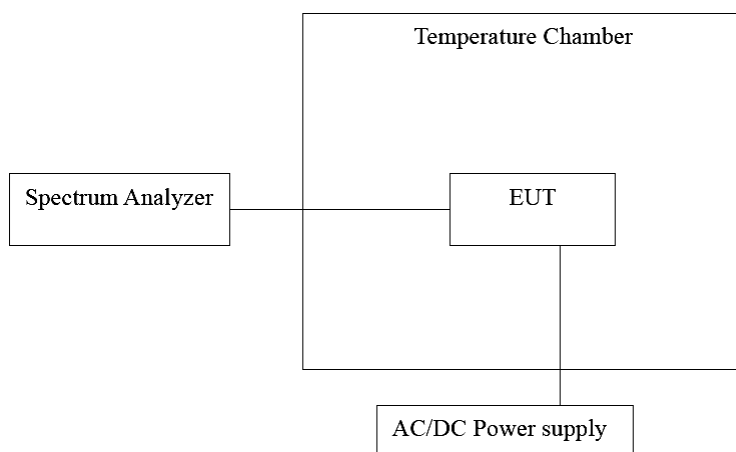
Mode 5: IEEE 802.11ac 80MHz Link Mode_ANT-2	
5290	
5530	
5610	

4.5. Frequency Stability Measurement

■ Limit

The frequency tolerance of the carrier signal shall be maintained within the band of operation frequency over a temperature variation of –30 degrees to 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

■ Test Setup



■ Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
Spectrum Analyzer	Agilent	E4408B	MY45107753	07/24/2014	1 year
Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	08/14/2014	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

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

4.6. 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.

Test Result

Temperature Variations

Model Number	UAP-AC-PRO					
Test Item	Frequency Stability					
Date of Test	07/09/2015					
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5280 MHz	-20	120	5279.9850	-15000	-2.841	Pass
	-10		5279.9988	-1200	-0.227	Pass
	0		5280.0071	7100	1.345	Pass
	10		5280.0380	38000	7.197	Pass
	20		5280.0404	40400	7.652	Pass
	30		5280.0456	45600	8.636	Pass
	40		5280.0580	58000	10.985	Pass
	50		5280.0797	79700	15.095	Pass
5560 MHz	-20	120	5559.9869	-13100	-2.356	Pass
	-10		5560.0010	1000	0.180	Pass
	0		5560.0020	2000	0.360	Pass
	10		5560.0188	18800	3.381	Pass
	20		5560.0253	25300	4.550	Pass
	30		5560.0289	28900	5.198	Pass
	40		5560.0592	59200	10.647	Pass
	50		5560.0677	67700	12.176	Pass

Voltage Variations

Model Number	UAP-AC-PRO					
Test Item	Frequency Stability					
Date of Test	07/09/2015					
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5280 MHz	20	138.00	5279.9668	-33200	-6.288	Pass
		120.00	5279.9858	-14200	-2.689	Pass
		102.00	5279.9953	-4700	-0.890	Pass
5560 MHz	20	138.00	5559.9906	-9400	-1.691	Pass
		120.00	5560.0075	7500	1.349	Pass
		102.00	5560.0145	14500	2.608	Pass

4.7. Antenna Requirement

■ Requirement

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.

■ Antenna Connector Construction

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

4.8. Directional Gain Calculated

According to FCC KDB 662911 D01 v02r01 - If all transmit signals are completely uncorrelated, then

Directional Gain= $10 \cdot \log [(10^{G1/10} + 10^{G2/10} + 10^{G3/10}) / N_{ANT}]$

Operate Freq. Band	Directional Gain (dBi)
IEEE 802.11a	3
IEEE 802.11n 5GHz 20MHz	3
IEEE 802.11n 5GHz 40MHz	3
IEEE 802.11ac 80MHz	3