

## 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-LITE  
Applicable Standard : FCC 47 CFR PART 15 SUBPART E: Oct., 2014  
ANSI C63.10:2013  
Receive Date : Apr. 08, 2015  
Test Period : May 29 ~ Jun. 18, 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	Sep. 08, 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-LITE  
FCC ID : SWX-UAPACL  
EUT Rated Voltage : DC 24V, 0.5A  
Test Voltage : 120 Vac / 60 Hz  
Applicable Standard : FCC 47 CFR PART 15 SUBPART E: Oct., 2014  
ANSI C63.10:2013  
Test Result : Complied  
Application Purpose : Class II permissive change  
Performing Lab. : A Test Lab Techno Corp.

No. 140-1, Changan Street, Bade City,  
Taoyuan County 334, Taiwan R.O.C.  
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Taiwan Accreditation Foundation accreditation number: 1330

<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)

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## 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)	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	UBIQUITI			
Model Number	UAP-AC-LITE			
FCC ID	SWX-UAPACL			
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			
Antenna Type	Dual band antenna			
Max. Antenna Gain	3 dBi			
Antenna Delivery	2TX + 2RX			
Frequency Stability Specification	± 30 ppm			
Operate Temp. Range	-10 ~ 70 °C			

Frequency Band		RF Output Power (W)
IEEE 802.11a	U-NII Band II-A	0.15
	U-NII Band II-C	0.19
IEEE 802.11n 5GHz 20 MHz	U-NII Band II-A	0.15
	U-NII Band II-C	0.19
IEEE 802.11n 5GHz 40 MHz	U-NII Band II-A	0.10
	U-NII Band II-C	0.13
IEEE 802.11ac 80 MHz	U-NII Band II-A	0.09
	U-NII Band II-C	0.12

### 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

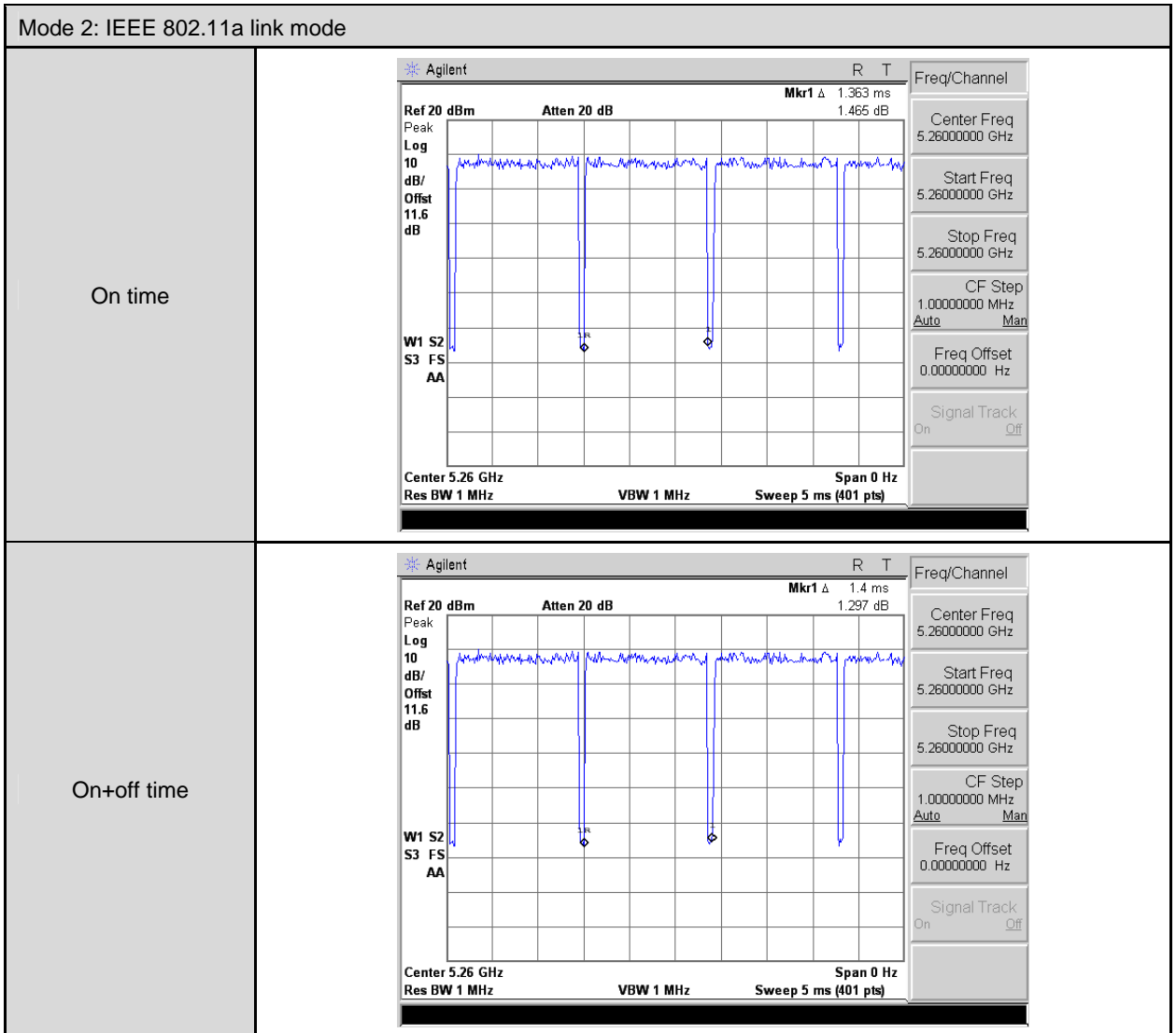
Software used to control the EUT for staying in continuous transmitting mode was programmed.

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.

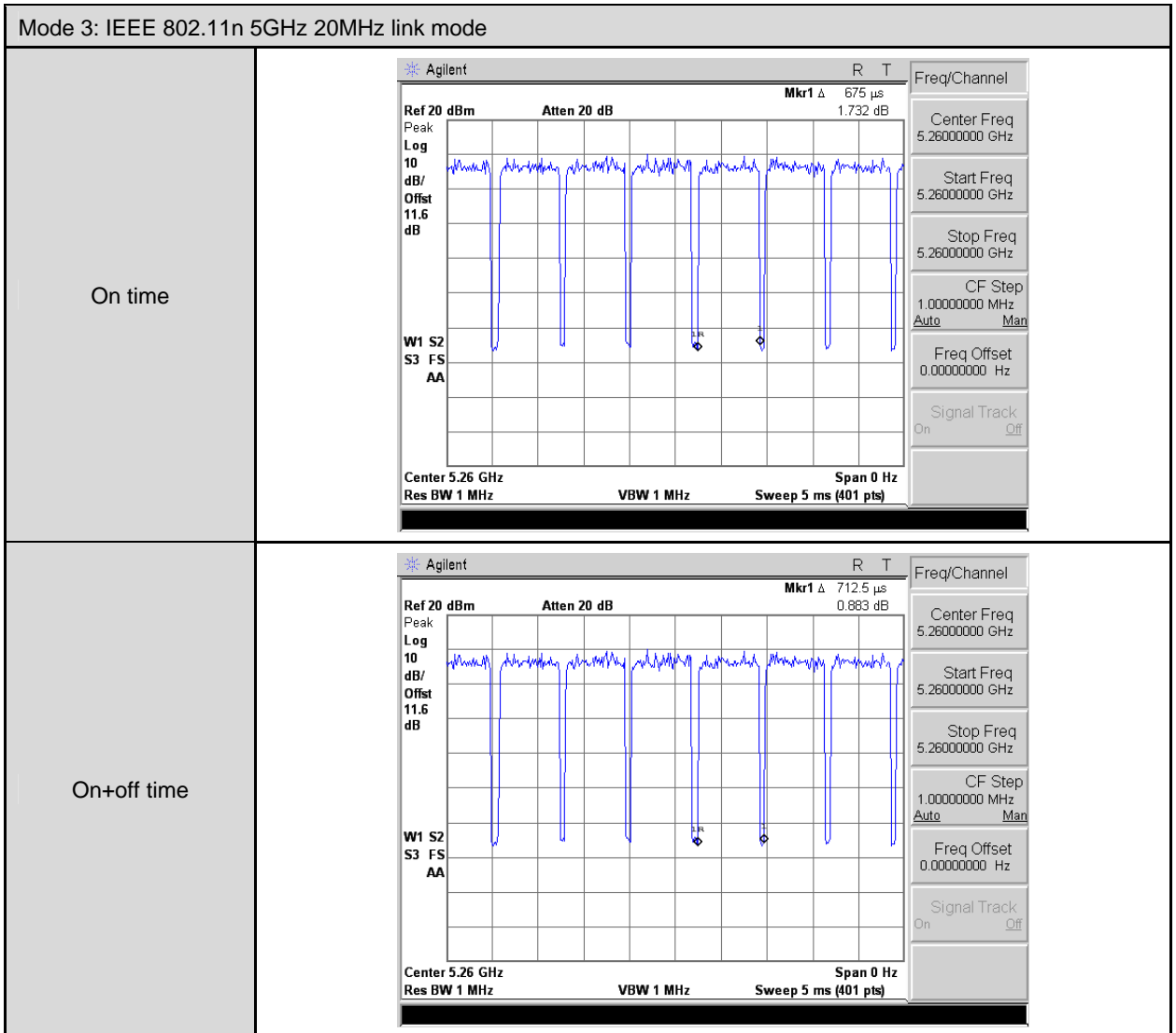
Test Mode	Band	Data Rate	Test Channel
Mode 2	U-NII Band II-A	6M	52, 56, 64
	U-NII Band II-C		100, 112, 140
Mode 3	U-NII Band II-A	13M	52, 56, 64
	U-NII Band II-C		100, 112, 140
Mode 4	U-NII Band II-A	27M	54, 62
	U-NII Band II-C		102, 110, 134
Mode 5	U-NII Band II-A	58.6M	58
	U-NII Band II-C		106, 122

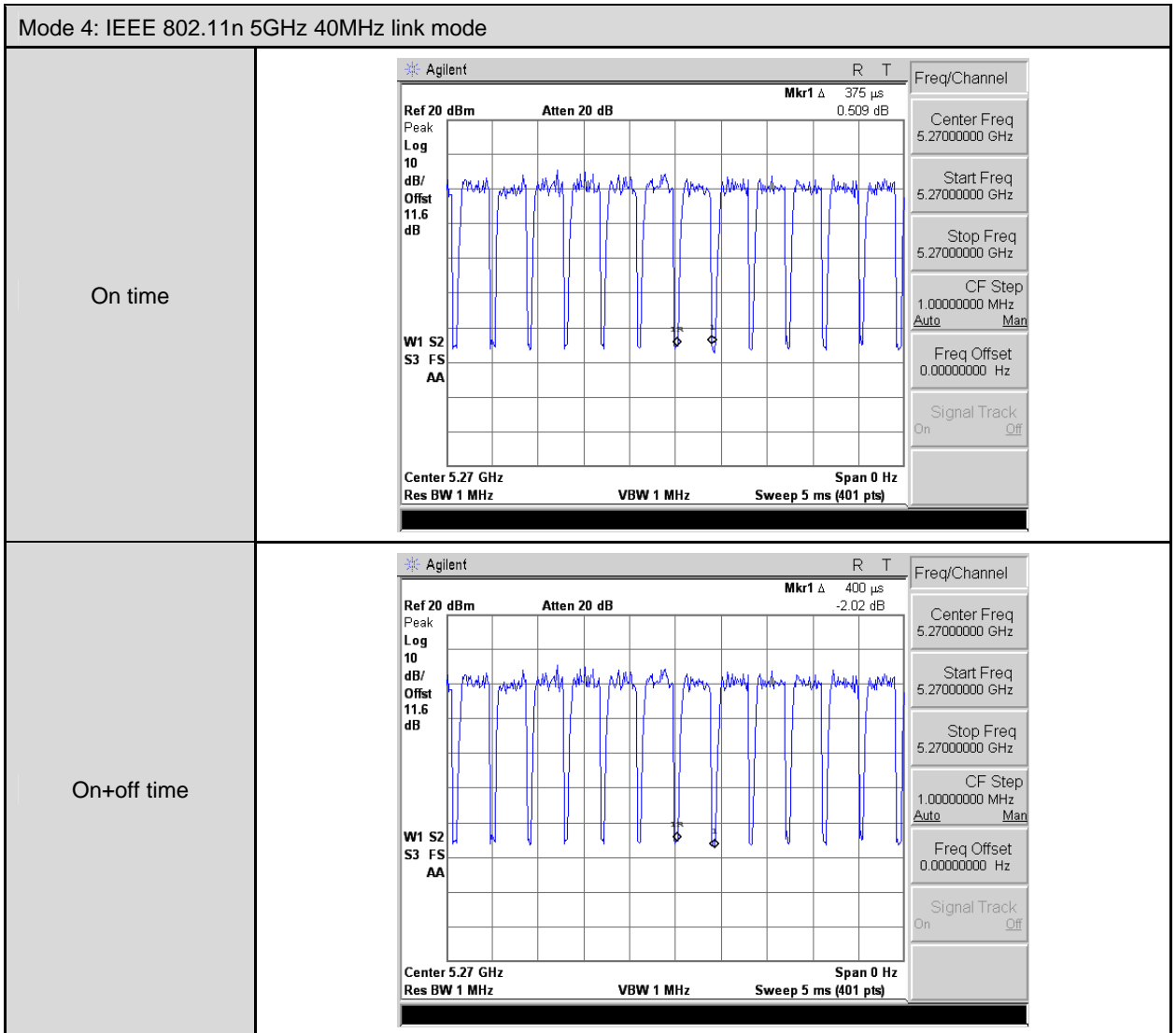
#### Duty cycle

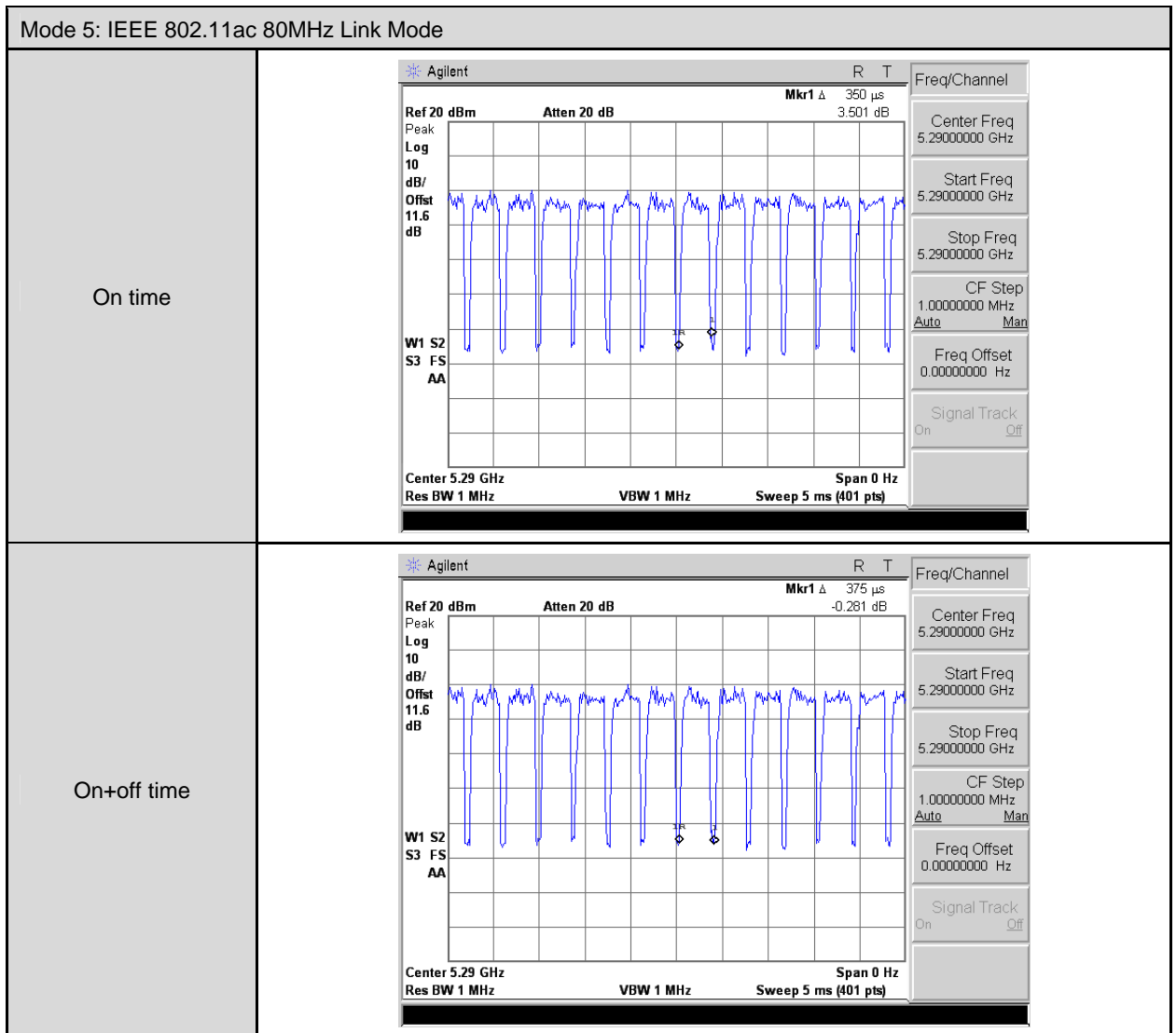
Test Mode	Frequency (MHz)	on time (ms)	on+off time (ms)	Duty cycle	Duty Factor (dB)	1/T Minimum VBW (kHz)
Mode 2	5260.0	1.363	1.400	0.974	0.116	0.734
Mode 3	5260.0	0.675	0.713	0.947	0.235	1.481
Mode 4	5270.0	0.375	0.400	0.938	0.280	2.667
Mode 5	5290.0	0.350	0.375	0.933	0.300	2.857











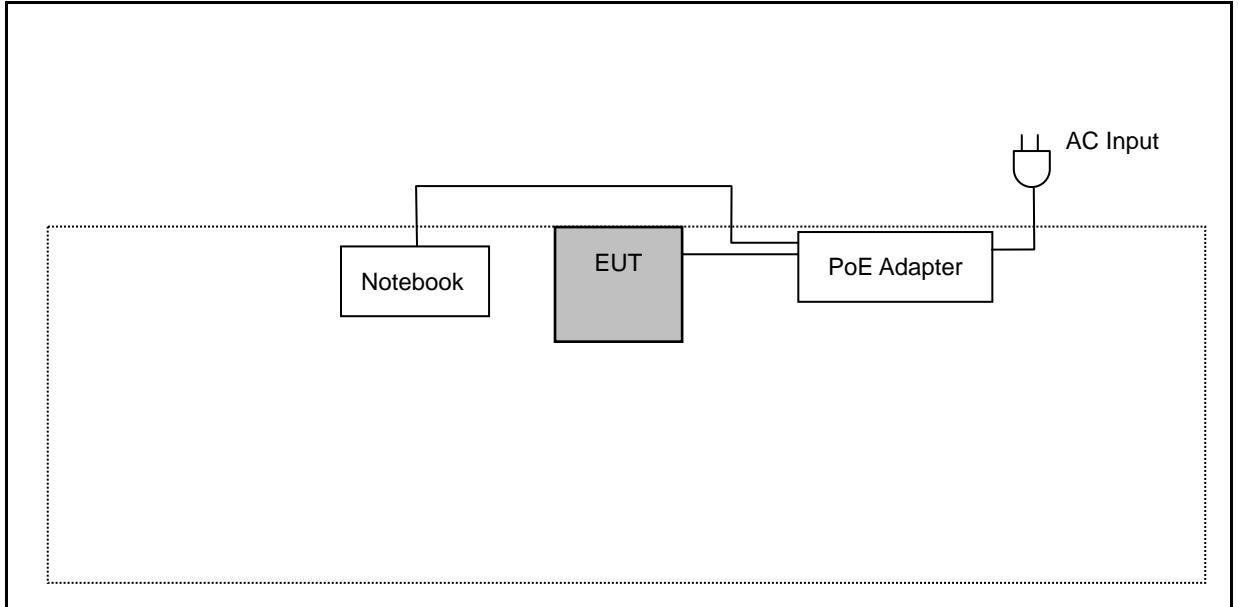
### 3.2. EUT Exercise Software

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 Emissions



### 3.4. Test Site Environment

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

## 4 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.

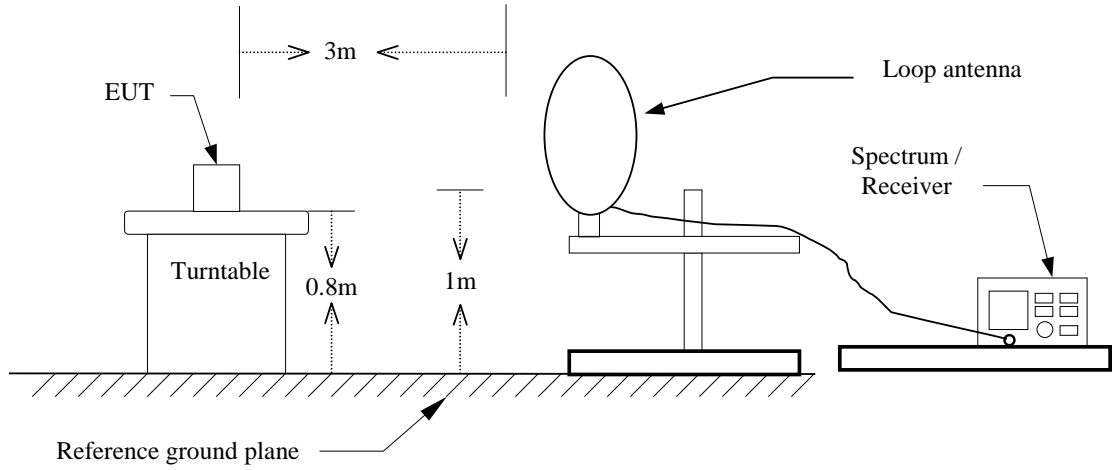
#### ■ Test Instruments

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	07/18/2014	1 year
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRON	BBHA9120D	9120D-550	06/10/2015	1 year
Horn Antenna (18~40GHz)	SCHWARZBECK MESS-ELEKTRON	BBHA9170	9170-320	06/13/2014	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	08/28/2014	1 year

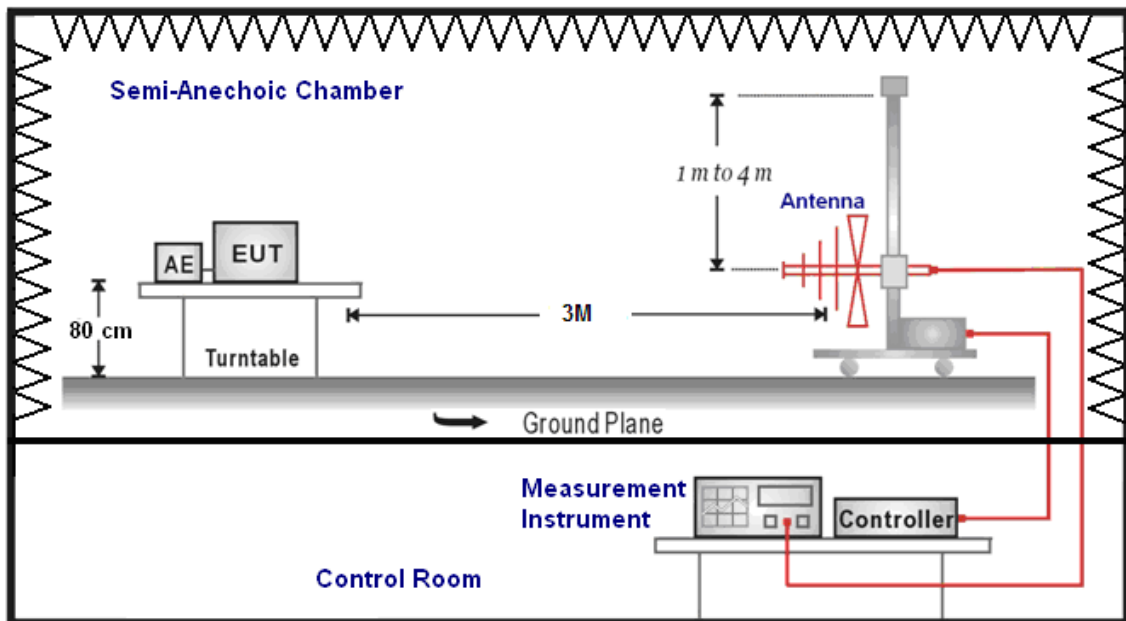
Note: N.C.R. = No Calibration Request.

■ **Setup**

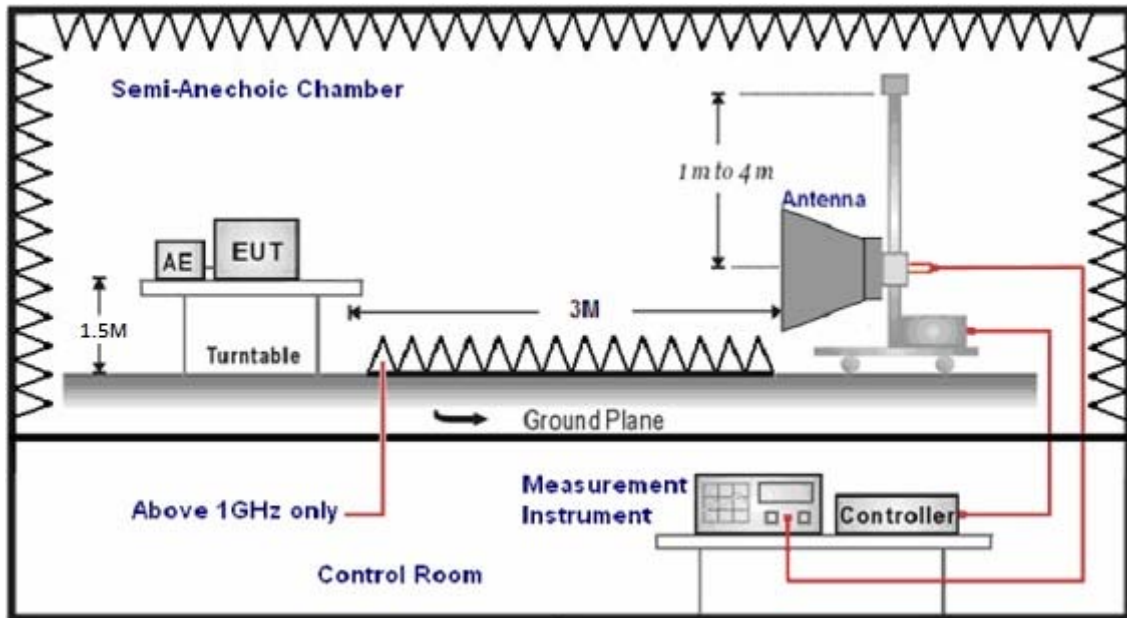
9kHz ~ 30MHz



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

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

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

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

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

The actual field intensity in decibels 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)  $\text{Amplitude (dBuV/m)} = \text{FI (dBuV)} + \text{AF (dB)} + \text{CL (dB)} - \text{Gain (dB)}$

FI= Reading of the field intensity.

AF= Antenna factor.

CL= Cable loss.

P.S Amplitude is auto calculate in spectrum analyzer.

(2)  $\text{Actual Amplitude (dBuV/m)} = \text{Amplitude (dBuV)} - \text{Dis (dB)}$

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-LITE	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 1	Date:	06/02/2015
		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
177.0000	38.89	-12.14	26.75	43.50	-16.75	QP	H
309.5000	39.60	-9.24	30.36	46.00	-15.64	QP	H
344.0000	41.56	-8.60	32.96	46.00	-13.04	QP	H
472.0000	31.93	-5.91	26.02	46.00	-19.98	QP	H
714.5000	25.42	-1.11	24.31	46.00	-21.69	QP	H
871.5000	27.01	1.90	28.91	46.00	-17.09	QP	H
121.0000	41.27	-14.11	27.16	43.50	-16.34	QP	V
177.5000	34.73	-12.18	22.55	43.50	-20.95	QP	V
286.5000	31.07	-9.79	21.28	46.00	-24.72	QP	V
359.5000	30.64	-8.26	22.38	46.00	-23.62	QP	V
667.0000	28.41	-2.17	26.24	46.00	-19.76	QP	V
791.0000	26.51	0.31	26.82	46.00	-19.18	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-LITE		Temp.(°C)/Hum.(%RH):	26(°C)/60%RH			
Test Mode:	Mode 2		Date:	05/30/2015			
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	37.50	1.12	38.62	74.00	-35.38	peak	H
4591.000	34.11	6.74	40.85	74.00	-33.15	peak	H
7643.000	32.06	14.25	46.31	74.00	-27.69	peak	H
2813.000	37.27	1.07	38.34	74.00	-35.66	peak	V
4605.000	33.60	6.79	40.39	74.00	-33.61	peak	V
7629.000	32.22	14.23	46.45	74.00	-27.55	peak	V

Standard:	FCC Part 15E		Test Distance:	3m			
Test item:	Transmitter Radiated Emissions		Power:	AC 120V/60Hz			
Model Number:	UAP-AC-LITE		Temp.(°C)/Hum.(%RH):	26(°C)/60%RH			
Test Mode:	Mode 2		Date:	05/30/2015			
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	36.44	1.07	37.51	74.00	-36.49	peak	H
4577.000	33.66	6.69	40.35	74.00	-33.65	peak	H
7671.000	33.03	14.30	47.33	74.00	-26.67	peak	H
2799.000	38.74	1.03	39.77	74.00	-34.23	peak	V
4549.000	33.37	6.61	39.98	74.00	-34.02	peak	V
7671.000	33.38	14.30	47.68	74.00	-26.32	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-LITE			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 2			Date:	05/30/2015		
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	36.56	1.07	37.63	74.00	-36.37	peak	H
4577.000	34.14	6.69	40.83	74.00	-33.17	peak	H
7678.000	32.85	14.31	47.16	74.00	-26.84	peak	H
2785.000	37.59	0.97	38.56	74.00	-35.44	peak	V
4570.000	34.18	6.68	40.86	74.00	-33.14	peak	V
7678.000	33.15	14.31	47.46	74.00	-26.54	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-LITE			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 2			Date:	05/30/2015		
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
2806.000	35.11	1.05	36.16	74.00	-37.84	peak	H
4591.000	32.55	6.74	39.29	74.00	-34.71	peak	H
7657.000	30.43	14.28	44.71	74.00	-29.29	peak	H
2813.000	36.86	1.07	37.93	74.00	-36.07	peak	V
4605.000	32.98	6.79	39.77	74.00	-34.23	peak	V
7685.000	31.30	14.32	45.62	74.00	-28.38	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-LITE		Temp.(°C)/Hum.(%RH):	26(°C)/60%RH			
Test Mode:	Mode 2		Date:	05/30/2015			
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
2813.000	35.24	1.07	36.31	74.00	-37.69	peak	H
4570.000	31.67	6.68	38.35	74.00	-35.65	peak	H
7685.000	30.73	14.32	45.05	74.00	-28.95	peak	H
2834.000	35.69	1.14	36.83	74.00	-37.17	peak	V
4577.000	33.51	6.69	40.20	74.00	-33.80	peak	V
7671.000	30.85	14.30	45.15	74.00	-28.85	peak	V

Standard:	FCC Part 15E		Test Distance:	3m			
Test item:	Transmitter Radiated Emissions		Power:	AC 120V/60Hz			
Model Number:	UAP-AC-LITE		Temp.(°C)/Hum.(%RH):	26(°C)/60%RH			
Test Mode:	Mode 2		Date:	05/30/2015			
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	34.26	1.12	35.38	74.00	-38.62	peak	H
4577.000	32.59	6.69	39.28	74.00	-34.72	peak	H
7643.000	30.86	14.25	45.11	74.00	-28.89	peak	H
2813.000	34.81	1.07	35.88	74.00	-38.12	peak	V
4591.000	32.03	6.74	38.77	74.00	-35.23	peak	V
7678.000	29.62	14.31	43.93	74.00	-30.07	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-LITE			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 3			Date:	05/30/2015		
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	36.48	1.05	37.53	74.00	-36.47	peak	H
4577.000	34.06	6.69	40.75	74.00	-33.25	peak	H
7678.000	32.82	14.31	47.13	74.00	-26.87	peak	H
2827.000	37.06	1.12	38.18	74.00	-35.82	peak	V
4549.000	33.30	6.61	39.91	74.00	-34.09	peak	V
7671.000	32.81	14.30	47.11	74.00	-26.89	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-LITE			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 3			Date:	05/30/2015		
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	37.75	1.07	38.82	74.00	-35.18	peak	H
4577.000	34.19	6.69	40.88	74.00	-33.12	peak	H
7671.000	32.15	14.30	46.45	74.00	-27.55	peak	H
2799.000	37.53	1.03	38.56	74.00	-35.44	peak	V
4577.000	33.49	6.69	40.18	74.00	-33.82	peak	V
7629.000	31.27	14.23	45.50	74.00	-28.50	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-LITE		Temp.(°C)/Hum.(%RH):	26(°C)/60%RH			
Test Mode:	Mode 3		Date:	05/30/2015			
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	37.48	1.07	38.55	74.00	-35.45	peak	H
4591.000	33.62	6.74	40.36	74.00	-33.64	peak	H
7657.000	32.08	14.28	46.36	74.00	-27.64	peak	H
2799.000	36.85	1.03	37.88	74.00	-36.12	peak	V
4577.000	35.10	6.69	41.79	74.00	-32.21	peak	V
7657.000	33.00	14.28	47.28	74.00	-26.72	peak	V

Standard:	FCC Part 15E		Test Distance:	3m			
Test item:	Transmitter Radiated Emissions		Power:	AC 120V/60Hz			
Model Number:	UAP-AC-LITE		Temp.(°C)/Hum.(%RH):	26(°C)/60%RH			
Test Mode:	Mode 3		Date:	05/30/2015			
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
2806.000	34.05	1.05	35.10	74.00	-38.90	peak	H
4626.000	31.52	6.85	38.37	74.00	-35.63	peak	H
7657.000	31.37	14.28	45.65	74.00	-28.35	peak	H
2827.000	34.07	1.12	35.19	74.00	-38.81	peak	V
4570.000	31.58	6.68	38.26	74.00	-35.74	peak	V
7657.000	31.44	14.28	45.72	74.00	-28.28	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:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	UAP-AC-LITE	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 3	Date:	05/30/2015
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
2813.000	37.31	1.07	38.38	74.00	-35.62	peak	H
4591.000	34.11	6.74	40.85	74.00	-33.15	peak	H
7685.000	32.64	14.32	46.96	74.00	-27.04	peak	H
2834.000	38.60	1.14	39.74	74.00	-34.26	peak	V
4570.000	35.23	6.68	41.91	74.00	-32.09	peak	V
7678.000	34.27	14.31	48.58	74.00	-25.42	peak	V

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Transmitter Radiated Emissions	Power:	AC 120V/60Hz
Model Number:	UAP-AC-LITE	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 3	Date:	05/30/2015
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
2813.000	36.46	1.07	37.53	74.00	-36.47	peak	H
4591.000	34.89	6.74	41.63	74.00	-32.37	peak	H
7671.000	32.20	14.30	46.50	74.00	-27.50	peak	H
2799.000	36.14	1.03	37.17	74.00	-36.83	peak	V
4598.000	33.23	6.77	40.00	74.00	-34.00	peak	V
7671.000	31.81	14.30	46.11	74.00	-27.89	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-LITE			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 4			Date:	05/30/2015		
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
2799.000	36.81	1.03	37.84	74.00	-36.16	peak	H
4647.000	32.96	6.91	39.87	74.00	-34.13	peak	H
7685.000	31.94	14.32	46.26	74.00	-27.74	peak	H
2841.000	37.22	1.17	38.39	74.00	-35.61	peak	V
4598.000	34.60	6.77	41.37	74.00	-32.63	peak	V
7671.000	32.73	14.30	47.03	74.00	-26.97	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-LITE			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 4			Date:	05/30/2015		
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
2806.000	34.50	1.05	35.55	74.00	-38.45	peak	H
4577.000	32.14	6.69	38.83	74.00	-35.17	peak	H
7671.000	32.14	14.30	46.44	74.00	-27.56	peak	H
2813.000	36.18	1.07	37.25	74.00	-36.75	peak	V
4591.000	34.16	6.74	40.90	74.00	-33.10	peak	V
7657.000	32.62	14.28	46.90	74.00	-27.10	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-LITE			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 4			Date:	05/30/2015		
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
2806.000	37.29	1.05	38.34	74.00	-35.66	peak	H
4570.000	33.38	6.68	40.06	74.00	-33.94	peak	H
7678.000	33.54	14.31	47.85	74.00	-26.15	peak	H
2785.000	37.49	0.97	38.46	74.00	-35.54	peak	V
4598.000	34.25	6.77	41.02	74.00	-32.98	peak	V
7671.000	32.12	14.30	46.42	74.00	-27.58	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-LITE			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 4			Date:	05/30/2015		
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
2799.000	37.08	1.03	38.11	74.00	-35.89	peak	H
4577.000	34.68	6.69	41.37	74.00	-32.63	peak	H
7678.000	33.20	14.31	47.51	74.00	-26.49	peak	H
2813.000	37.25	1.07	38.32	74.00	-35.68	peak	V
4570.000	34.32	6.68	41.00	74.00	-33.00	peak	V
7650.000	33.84	14.26	48.10	74.00	-25.90	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-LITE		Temp.(°C)/Hum.(%RH):	26(°C)/60%RH			
Test Mode:	Mode 4		Date:	05/30/2015			
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
2771.000	38.87	0.93	39.80	74.00	-34.20	peak	H
4570.000	34.34	6.68	41.02	74.00	-32.98	peak	H
7671.000	32.64	14.30	46.94	74.00	-27.06	peak	H
2813.000	37.75	1.07	38.82	74.00	-35.18	peak	V
4605.000	33.16	6.79	39.95	74.00	-34.05	peak	V
7678.000	32.77	14.31	47.08	74.00	-26.92	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-LITE	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 5	Date:	05/30/2015
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
2827.000	35.70	1.12	36.82	74.00	-37.18	peak	H
4598.000	34.07	6.77	40.84	74.00	-33.16	peak	H
7629.000	32.56	14.23	46.79	74.00	-27.21	peak	H
2799.000	37.27	1.03	38.30	74.00	-35.70	peak	V
4577.000	34.47	6.69	41.16	74.00	-32.84	peak	V
7657.000	31.54	14.28	45.82	74.00	-28.18	peak	V

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Transmitter Radiated Emissions	Power:	AC 120V/60Hz
Model Number:	UAP-AC-LITE	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 5	Date:	05/30/2015
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
2806.000	36.21	1.05	37.26	74.00	-36.74	peak	H
4570.000	33.56	6.68	40.24	74.00	-33.76	peak	H
7657.000	32.99	14.28	47.27	74.00	-26.73	peak	H
2806.000	37.25	1.05	38.30	74.00	-35.70	peak	V
4598.000	34.09	6.77	40.86	74.00	-33.14	peak	V
7671.000	32.44	14.30	46.74	74.00	-27.26	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-LITE			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 5			Date:	05/30/2015		
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
2806.000	37.70	1.05	38.75	74.00	-35.25	peak	H
4577.000	34.49	6.69	41.18	74.00	-32.82	peak	H
7657.000	34.10	14.28	48.38	74.00	-25.62	peak	H
2813.000	36.89	1.07	37.96	74.00	-36.04	peak	V
4570.000	33.93	6.68	40.61	74.00	-33.39	peak	V
7671.000	33.03	14.30	47.33	74.00	-26.67	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Transmitter Radiated Emissions			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-LITE			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 5			Date:	05/30/2015		
Frequency:	5690MHz			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	35.82	1.12	36.94	74.00	-37.06	peak	H
4570.000	33.96	6.68	40.64	74.00	-33.36	peak	H
7685.000	30.90	14.32	45.22	74.00	-28.78	peak	H
2799.000	37.71	1.03	38.74	74.00	-35.26	peak	V
4570.000	33.68	6.68	40.36	74.00	-33.64	peak	V
7650.000	30.98	14.26	45.24	74.00	-28.76	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-LITE	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 2	Date:	05/29/2015
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	46.19	8.48	54.67	74.00	-19.33	peak	H
5350.000	38.37	8.48	46.85	54.00	-7.15	AVG	H
5350.660	48.98	8.48	57.46	74.00	-16.54	peak	H
5350.660	38.32	8.48	46.80	54.00	-7.20	AVG	H
5350.000	54.95	8.48	63.43	74.00	-10.57	peak	V
5350.000	44.30	8.48	52.78	54.00	-1.22	AVG	H
5350.660	55.68	8.48	64.16	74.00	-9.84	peak	V
5350.660	43.77	8.48	52.25	54.00	-1.75	AVG	V

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Band Edge	Power:	AC 120V/60Hz
Model Number:	UAP-AC-LITE	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 2	Date:	05/29/2015
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
5411.800	44.90	8.56	53.46	74.00	-20.54	peak	H
5411.800	36.02	8.56	44.58	54.00	-9.42	AVG	H
5460.000	41.95	8.62	50.57	74.00	-23.43	peak	H
5449.600	46.31	8.60	54.91	74.00	-19.09	peak	V
5449.600	36.07	8.60	44.67	54.00	-9.33	AVG	H
5460.000	43.56	8.62	52.18	74.00	-21.82	peak	V
5460.000	36.56	8.62	45.18	54.00	-8.82	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-LITE			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 3			Date:	05/29/2015		
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	47.19	8.48	55.67	74.00	-18.33	peak	H
5350.000	38.07	8.48	46.55	54.00	-7.45	peak	H
5352.620	50.96	8.48	59.44	74.00	-14.56	AVG	H
5350.000	54.19	8.48	62.67	74.00	-11.33	peak	V
5350.000	43.88	8.48	52.36	54.00	-1.64	AVG	V
5352.340	57.89	8.48	66.37	74.00	-7.63	peak	V
5352.340	42.57	8.48	51.05	54.00	-2.95	AVG	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Band Edge			Power:	AC 120V/60Hz		
Model Number:	UAP-AC-LITE			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 3			Date:	05/29/2015		
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
5428.750	45.06	8.58	53.64	74.00	-20.36	peak	H
5428.750	33.79	8.58	42.37	54.00	-11.63	AVG	H
5460.000	44.37	8.62	52.99	74.00	-21.01	peak	H
5460.000	34.21	8.62	42.83	54.00	-11.17	AVG	H
5403.700	46.87	8.54	55.41	74.00	-18.59	peak	V
5403.700	35.72	8.54	44.26	54.00	-9.74	AVG	V
5460.000	49.13	8.62	57.75	74.00	-16.25	peak	V
5460.000	36.48	8.62	45.10	54.00	-8.90	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-LITE	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 4	Date:	05/29/2015
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	47.14	8.48	55.62	74.00	-18.38	peak	H
5350.000	37.73	8.48	46.21	54.00	-7.79	AVG	H
5354.860	50.71	8.48	59.19	74.00	-14.81	peak	H
5354.860	36.48	8.48	44.96	54.00	-9.04	AVG	H
5350.000	53.00	8.48	61.48	74.00	-12.52	peak	V
5350.000	44.11	8.48	52.59	54.00	-1.41	AVG	V
5351.500	56.56	8.48	65.04	74.00	-8.96	peak	V
5351.500	42.80	8.48	51.28	54.00	-2.72	AVG	V

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Band Edge	Power:	AC 120V/60Hz
Model Number:	UAP-AC-LITE	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 4	Date:	05/29/2015
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
5459.050	49.13	8.62	57.75	74.00	-16.25	peak	H
5459.050	36.53	8.62	45.15	54.00	-8.85	AVG	H
5460.000	45.98	8.62	54.60	74.00	-19.40	peak	H
5460.000	36.62	8.62	45.24	54.00	-8.76	AVG	H
5454.850	51.28	8.61	59.89	74.00	-14.11	peak	V
5454.850	39.55	8.61	48.16	54.00	-5.84	AVG	V
5460.000	50.68	8.62	59.30	74.00	-14.70	peak	V
5460.000	40.19	8.62	48.81	54.00	-5.19	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-LITE	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 5	Date:	05/29/2015
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	47.94	8.48	56.42	74.00	-17.58	peak	H
5350.000	37.98	8.48	46.46	54.00	-7.54	AVG	H
5354.770	50.62	8.48	59.10	74.00	-14.90	peak	H
5354.770	37.05	8.48	45.53	54.00	-8.47	AVG	H
5350.000	53.56	8.48	62.04	74.00	-11.96	peak	V
5350.000	43.90	8.48	52.38	54.00	-1.62	AVG	V
5352.900	56.09	8.48	64.57	74.00	-9.43	peak	V
5352.900	43.37	8.48	51.85	54.00	-2.15	AVG	V

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Band Edge	Power:	AC 120V/60Hz
Model Number:	UAP-AC-LITE	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 5	Date:	05/29/2015
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
5456.950	52.91	8.61	61.52	74.00	-12.48	peak	H
5456.950	38.16	8.61	46.77	54.00	-7.23	AVG	H
5460.000	49.85	8.62	58.47	74.00	-15.53	peak	H
5460.000	39.89	8.62	48.51	54.00	-5.49	AVG	H
5457.550	55.94	8.61	64.55	74.00	-9.45	peak	V
5457.550	42.67	8.61	51.28	54.00	-2.72	AVG	V
5460.000	54.41	8.62	63.03	74.00	-10.97	peak	V
5460.000	43.43	8.62	52.05	54.00	-1.95	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

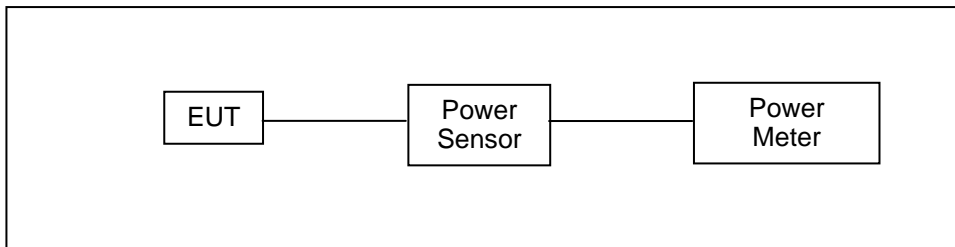
### ■ Limit

Conducted Output Power

Frequency Range (MHz)	FCC Limit
5.250 ~ 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)

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-LITE						
Test Item		Maximum Conducted Output Power						
Test Mode		Mode 2: IEEE 802.11a Link Mode						
Date of Test		05/29/2015						
Frequency (MHz)	Data Rate	Antenna 0		Antenna 1		Antenna 0+1		FCC Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5260.0	6M	17.59	0.06	18.47	0.07	21.06	0.13	< 24
5280.0		17.46	0.06	18.90	0.08	21.25	0.13	
5300.0		17.56	0.06	18.98	0.08	21.34	0.14	
5320.0		17.95	0.06	19.30	0.09	<b>21.69</b>	<b>0.15</b>	
5500.0		19.51	0.09	19.59	0.09	22.56	0.18	< 24
5520.0		19.42	0.09	19.67	0.09	22.56	0.18	
5540.0		19.25	0.08	19.74	0.09	22.51	0.18	
5560.0		19.22	0.08	19.77	0.09	22.51	0.18	
5580.0		19.55	0.09	19.74	0.09	22.66	0.18	
5600.0		19.39	0.09	20.30	0.11	<b>22.88</b>	<b>0.19</b>	
5620.0		19.34	0.09	19.59	0.09	22.48	0.18	
5640.0		19.47	0.09	19.14	0.08	22.32	0.17	
5660.0		19.45	0.09	19.32	0.09	22.40	0.17	
5680.0		19.68	0.09	19.25	0.08	22.48	0.18	
5700.0		19.66	0.09	18.66	0.07	22.20	0.17	
5260.0		54M	17.39	0.05	18.28	0.07	20.87	
5280.0	17.11		0.05	18.77	0.08	21.03	0.13	
5300.0	17.43		0.06	18.74	0.07	21.14	0.13	
5320.0	17.64		0.06	19.03	0.08	21.40	0.14	
5500.0	19.11		0.08	19.26	0.08	22.20	0.17	< 24
5520.0	19.02		0.08	19.55	0.09	22.30	0.17	
5540.0	19.10		0.08	19.63	0.09	22.38	0.17	
5560.0	18.83		0.08	19.72	0.09	22.31	0.17	
5580.0	19.38		0.09	19.71	0.09	22.56	0.18	
5600.0	19.14		0.08	20.05	0.10	22.63	0.18	
5620.0	19.23		0.08	19.43	0.09	22.34	0.17	
5640.0	19.34		0.09	18.75	0.07	22.07	0.16	
5660.0	19.25		0.08	18.98	0.08	22.13	0.16	
5680.0	19.59		0.09	19.02	0.08	22.32	0.17	
5700.0	19.62		0.09	18.44	0.07	22.08	0.16	

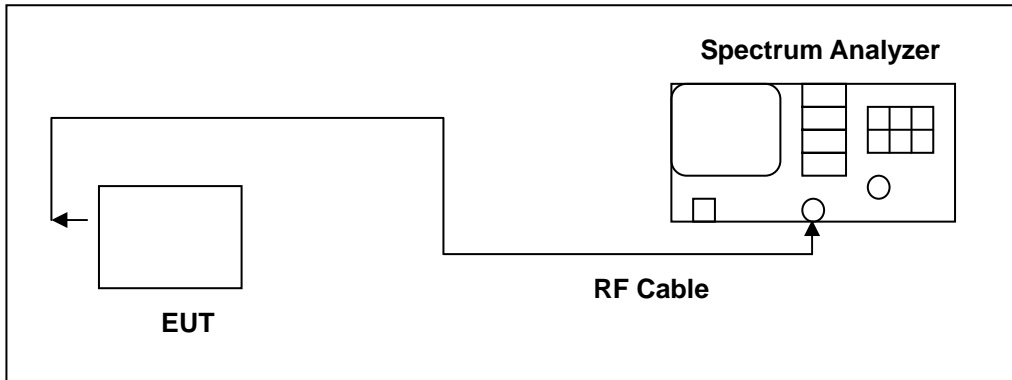
Model Number		UAP-AC-LITE						
Test Item		Maximum Conducted Output Power						
Test Mode		Mode 3: IEEE 802.11n 5GHz 20MHz link mode						
Date of Test		06/17/2014						
Frequency (MHz)	Data Rate	Antenna 0		Antenna 1		Antenna 0+1		FCC Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5260.0	13M	17.76	0.06	18.51	0.07	21.16	0.13	< 24
5280.0		17.88	0.06	18.85	0.08	21.40	0.14	
5300.0		18.00	0.06	18.95	0.08	21.51	0.14	
5320.0		18.31	0.07	19.30	0.09	<b>21.84</b>	<b>0.15</b>	
5500.0		19.54	0.09	19.67	0.09	22.62	0.18	< 24
5520.0		19.52	0.09	19.89	0.10	22.72	0.19	
5540.0		19.41	0.09	20.02	0.10	<b>22.74</b>	<b>0.19</b>	
5560.0		19.33	0.09	20.06	0.10	22.72	0.19	
5580.0		19.43	0.09	19.90	0.10	22.68	0.19	
5600.0		19.39	0.09	19.80	0.10	22.61	0.18	
5620.0		19.33	0.09	19.62	0.09	22.49	0.18	
5640.0		19.53	0.09	19.28	0.08	22.42	0.17	
5660.0		19.43	0.09	19.05	0.08	22.25	0.17	
5680.0		19.63	0.09	19.38	0.09	22.52	0.18	
5700.0		19.62	0.09	18.71	0.07	22.20	0.17	
5260.0		130M	17.71	0.06	18.34	0.07	21.05	
5280.0	17.66		0.06	18.62	0.07	21.18	0.13	
5300.0	17.92		0.06	18.71	0.07	21.34	0.14	
5320.0	18.18		0.07	18.85	0.08	21.54	0.14	
5500.0	18.96		0.08	19.44	0.09	22.22	0.17	< 24
5520.0	19.22		0.08	19.71	0.09	22.48	0.18	
5540.0	19.04		0.08	19.85	0.10	22.47	0.18	
5560.0	18.95		0.08	20.03	0.10	22.53	0.18	
5580.0	19.26		0.08	19.68	0.09	22.49	0.18	
5600.0	19.08		0.08	19.71	0.09	22.42	0.17	
5620.0	18.99		0.08	19.43	0.09	22.23	0.17	
5640.0	19.48		0.09	19.12	0.08	22.31	0.17	
5660.0	19.22		0.08	18.92	0.08	22.08	0.16	
5680.0	19.47		0.09	19.29	0.08	22.39	0.17	
5700.0	19.51		0.09	18.66	0.07	22.12	0.16	

Model Number		UAP-AC-LITE						
Test Item		Maximum Conducted Output Power						
Test Mode		Mode 4: IEEE 802.11n 5GHz 40MHz link mode						
Date of Test		06/17/2014						
Frequency (MHz)	Data Rate	Antenna 0		Antenna 1		Antenna 0+1		FCC Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5270.0	27M	16.18	0.04	17.01	0.05	19.63	0.09	< 24
5310.0		16.20	0.04	17.45	0.06	<b>19.88</b>	<b>0.10</b>	
5510.0		18.11	0.06	18.17	0.07	21.15	0.13	< 24
5550.0		17.91	0.06	18.38	0.07	<b>21.16</b>	<b>0.13</b>	
5590.0		17.78	0.06	18.17	0.07	20.99	0.13	
5630.0		17.81	0.06	17.87	0.06	20.85	0.12	
5670.0		17.95	0.06	17.46	0.06	20.72	0.12	
5270.0	270M	16.11	0.04	16.63	0.05	19.39	0.09	< 24
5310.0		15.85	0.04	17.32	0.05	19.66	0.09	< 24
5510.0		17.99	0.06	17.97	0.06	20.99	0.13	
5550.0		17.77	0.06	18.03	0.06	20.91	0.12	
5590.0		17.66	0.06	17.88	0.06	20.78	0.12	
5630.0		17.75	0.06	17.61	0.06	20.69	0.12	
5670.0		17.92	0.06	17.37	0.05	20.66	0.12	

Model Number		UAP-AC-LITE						
Test Item		Maximum Conducted Output Power						
Test Mode		Mode 5: IEEE 802.11ac 80MHz Link Mode						
Date of Test		06/17/2014						
Frequency (MHz)	Data Rate	Antenna 0		Antenna 1		Antenna 0+1		FCC Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5290.0	58.6M	15.83	0.04	16.87	0.05	<b>19.39</b>	<b>0.09</b>	< 24
5530.0		17.53	0.06	17.86	0.06	<b>20.71</b>	<b>0.12</b>	< 24
5610.0		17.42	0.06	17.60	0.06	20.52	0.11	
5290.0	780M	15.75	0.04	16.67	0.05	19.24	0.08	< 24
5530.0		16.83	0.05	17.51	0.06	20.19	0.10	< 24
5610.0		16.69	0.05	17.58	0.06	20.17	0.10	

### 4.3. 26dB RF Bandwidth Measurement

■ **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-LITE	
Test Item	26dB RF Bandwidth	
Test Mode	Mode 2: IEEE 802.11a Link Mode	
Date of Test	06/18/2015	
Frequency (MHz)	Antenna 0 (MHz)	Antenna 1 (MHz)
5260	23.209	23.530
5280	23.545	24.320
5320	24.056	24.697
5500	23.426	24.698
5580	23.047	24.584
5700	23.335	23.507

Model Number	UAP-AC-LITE	
Test Item	26dB RF Bandwidth	
Test Mode	Mode 3: IEEE 802.11n 5GHz 20MHz link mode	
Date of Test	06/18/2015	
Frequency (MHz)	Antenna 0 (MHz)	Antenna 1 (MHz)
5260	23.522	25.152
5280	23.979	24.979
5320	23.800	25.000
5500	24.881	25.121
5580	24.734	24.647
5700	23.395	24.995

Model Number	UAP-AC-LITE	
Test Item	26dB RF Bandwidth	
Test Mode	Mode 4: IEEE 802.11n 5GHz 40MHz link mode	
Date of Test	06/18/2015	
Frequency (MHz)	Antenna 0 (MHz)	Antenna 1 (MHz)
5270	44.139	46.381
5310	45.016	45.958
5510	45.142	45.100
5590	44.781	46.049
5670	44.342	45.326

Model Number	UAP-AC-LITE	
Test Item	26dB RF Bandwidth	
Test Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode	
Date of Test	06/18/2015	
Frequency (MHz)	Antenna 0 (MHz)	Antenna 1 (MHz)
5290	86.330	87.681
5530	86.075	87.676
5610	86.399	86.642

■ Test Graphs

Antenna 0

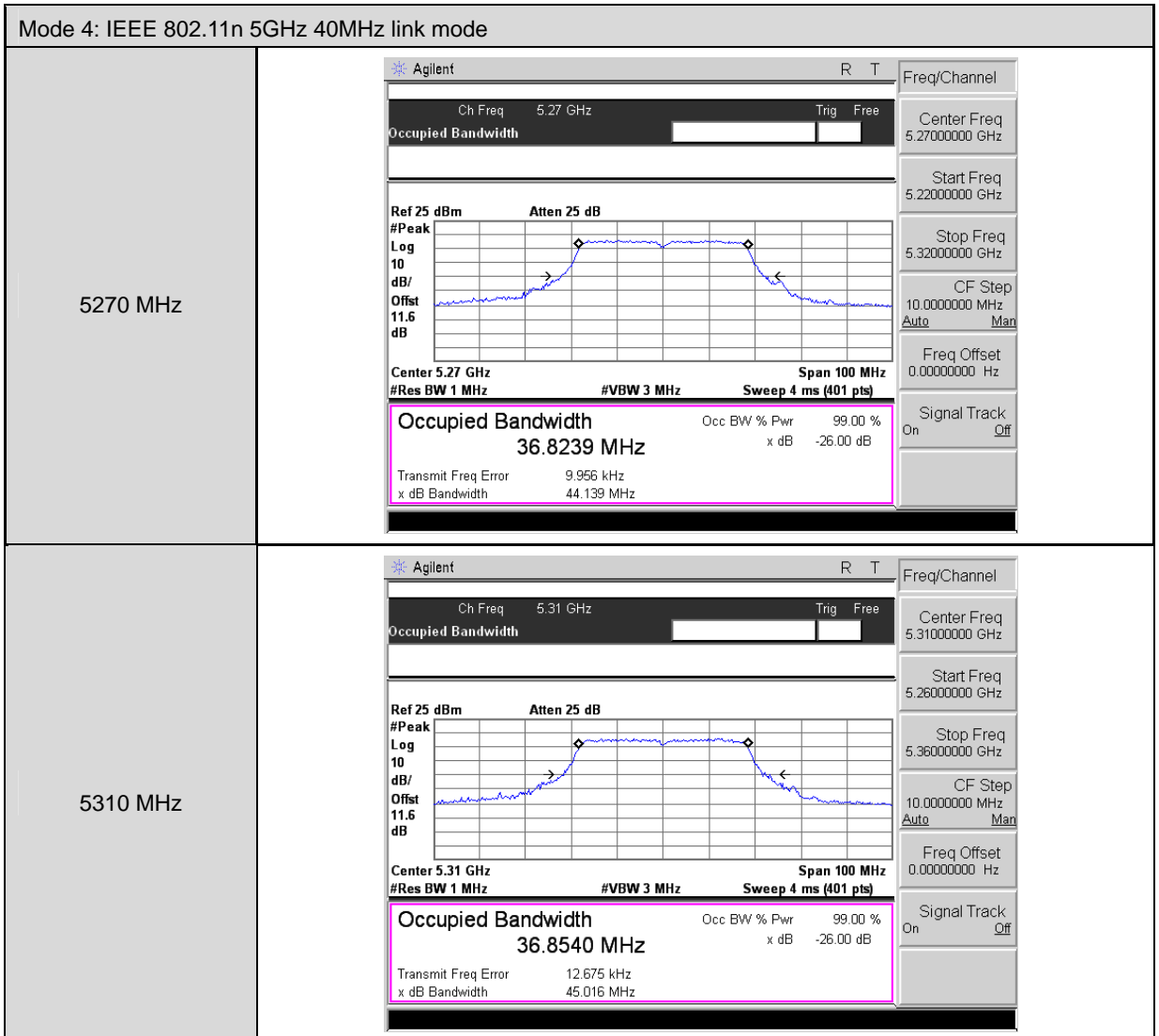
Mode 2: IEEE 802.11a Link Mode	
5260 MHz	<p>Agilent R T</p> <p>Ch Freq 5.26 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.26 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth</b> Occ BW % Pwr 99.00 % <b>17.6676 MHz</b> x dB -26.00 dB</p> <p>Transmit Freq Error 13.378 kHz x dB Bandwidth 23.209 MHz</p> <p>Freq/Channel: Center Freq 5.26000000 GHz, Start Freq 5.23500000 GHz, Stop Freq 5.28500000 GHz, CF Step 5.00000000 MHz, Freq Offset 0.00000000 Hz, Signal Track On</p>
5280 MHz	<p>Agilent R T</p> <p>Ch Freq 5.28 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.28 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth</b> Occ BW % Pwr 99.00 % <b>17.7756 MHz</b> x dB -26.00 dB</p> <p>Transmit Freq Error -4.325 kHz x dB Bandwidth 23.545 MHz</p> <p>Freq/Channel: Center Freq 5.28000000 GHz, Start Freq 5.25500000 GHz, Stop Freq 5.30500000 GHz, CF Step 5.00000000 MHz, Freq Offset 0.00000000 Hz, Signal Track On</p>
5320 MHz	<p>Agilent R T</p> <p>Ch Freq 5.32 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.32 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth</b> Occ BW % Pwr 99.00 % <b>17.8358 MHz</b> x dB -26.00 dB</p> <p>Transmit Freq Error 13.290 kHz x dB Bandwidth 24.056 MHz</p> <p>Freq/Channel: Center Freq 5.32000000 GHz, Start Freq 5.29500000 GHz, Stop Freq 5.34500000 GHz, CF Step 5.00000000 MHz, Freq Offset 0.00000000 Hz, Signal Track On</p>



Mode 2: IEEE 802.11a Link Mode	
5500 MHz	<p>Agilent R T</p> <p>Ch Freq 5.5 GHz Trng Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.5 GHz Span 50 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth</b> 17.7712 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 36.306 kHz x dB Bandwidth 23.426 MHz</p> <p>Freq/Channel: Center Freq 5.5000000 GHz, Start Freq 5.4750000 GHz, Stop Freq 5.5250000 GHz, CF Step 5.0000000 MHz, Freq Offset 0.0000000 Hz, Signal Track On</p>
5560 MHz	<p>Agilent R T</p> <p>Ch Freq 5.56 GHz Trng Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.56 GHz Span 50 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth</b> 17.7371 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 36.781 kHz x dB Bandwidth 23.047 MHz</p> <p>Freq/Channel: Center Freq 5.5600000 GHz, Start Freq 5.5350000 GHz, Stop Freq 5.5850000 GHz, CF Step 5.0000000 MHz, Freq Offset 0.0000000 Hz, Signal Track On</p>
5700 MHz	<p>Agilent R T</p> <p>Ch Freq 5.7 GHz Trng Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.7 GHz Span 50 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth</b> 17.7503 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 6.419 kHz x dB Bandwidth 23.335 MHz</p> <p>Freq/Channel: Center Freq 5.7000000 GHz, Start Freq 5.6750000 GHz, Stop Freq 5.7250000 GHz, CF Step 5.0000000 MHz, Freq Offset 0.0000000 Hz, Signal Track On</p>

Mode 3: IEEE 802.11n 5GHz 20MHz link mode	
5260 MHz	<p>Agilent R T</p> <p>Ch Freq 5.26 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.26 GHz Span 50 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 18.7539 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -17.357 kHz</p> <p>x dB Bandwidth 23.522 MHz</p> <p>Freq/Channel: Center Freq 5.26000000 GHz, Start Freq 5.23500000 GHz, Stop Freq 5.28500000 GHz, CF Step 5.00000000 MHz, Freq Offset 0.00000000 Hz, Signal Track On</p>
5280 MHz	<p>Agilent R T</p> <p>Ch Freq 5.28 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.28 GHz Span 50 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 18.7143 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 22.351 kHz</p> <p>x dB Bandwidth 23.979 MHz</p> <p>Freq/Channel: Center Freq 5.28000000 GHz, Start Freq 5.25500000 GHz, Stop Freq 5.30500000 GHz, CF Step 5.00000000 MHz, Freq Offset 0.00000000 Hz, Signal Track On</p>
5320 MHz	<p>Agilent R T</p> <p>Ch Freq 5.32 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.32 GHz Span 50 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 18.7684 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 57.091 kHz</p> <p>x dB Bandwidth 23.800 MHz</p> <p>Freq/Channel: Center Freq 5.32000000 GHz, Start Freq 5.29500000 GHz, Stop Freq 5.34500000 GHz, CF Step 5.00000000 MHz, Freq Offset 0.00000000 Hz, Signal Track On</p>

Mode 3: IEEE 802.11n 5GHz 20MHz link mode	
5500 MHz	<p>Agilent R T</p> <p>Ch Freq 5.5 GHz Trng Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/ Offst 11.6 dB</p> <p>Center 5.5 GHz Span 50 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 19.0737 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 32.732 kHz x dB Bandwidth 24.881 MHz</p> <p>Freq/Channel</p> <p>Center Freq 5.5000000 GHz</p> <p>Start Freq 5.4750000 GHz</p> <p>Stop Freq 5.5250000 GHz</p> <p>CF Step 5.0000000 MHz Auto Man</p> <p>Freq Offset 0.0000000 Hz</p> <p>Signal Track On Off</p>
5560 MHz	<p>Agilent R T</p> <p>Ch Freq 5.56 GHz Trng Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/ Offst 11.6 dB</p> <p>Center 5.56 GHz Span 50 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 18.9498 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 27.341 kHz x dB Bandwidth 24.734 MHz</p> <p>Freq/Channel</p> <p>Center Freq 5.5600000 GHz</p> <p>Start Freq 5.5350000 GHz</p> <p>Stop Freq 5.5850000 GHz</p> <p>CF Step 5.0000000 MHz Auto Man</p> <p>Freq Offset 0.0000000 Hz</p> <p>Signal Track On Off</p>
5700 MHz	<p>Agilent R T</p> <p>Ch Freq 5.7 GHz Trng Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/ Offst 11.6 dB</p> <p>Center 5.7 GHz Span 50 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 18.7180 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -3.923 kHz x dB Bandwidth 23.395 MHz</p> <p>Freq/Channel</p> <p>Center Freq 5.7000000 GHz</p> <p>Start Freq 5.6750000 GHz</p> <p>Stop Freq 5.7250000 GHz</p> <p>CF Step 5.0000000 MHz Auto Man</p> <p>Freq Offset 0.0000000 Hz</p> <p>Signal Track On Off</p>



Mode 4: IEEE 802.11n 5GHz 40MHz link mode													
5510 MHz	<p>Agilent R T</p> <p>Ch Freq 5.51 GHz Trng Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.51 GHz Span 100 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <table border="1"> <tr> <td><b>Occupied Bandwidth</b></td> <td>Occ BW % Pwr</td> <td>99.00 %</td> </tr> <tr> <td>36.9936 MHz</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>Transmit Freq Error</td> <td>58.341 kHz</td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>45.142 MHz</td> <td></td> </tr> </table> <p>Freq/Channel: Center Freq 5.51000000 GHz, Start Freq 5.46000000 GHz, Stop Freq 5.56000000 GHz, CF Step 10.00000000 MHz, Freq Offset 0.00000000 Hz, Signal Track On</p>	<b>Occupied Bandwidth</b>	Occ BW % Pwr	99.00 %	36.9936 MHz	x dB	-26.00 dB	Transmit Freq Error	58.341 kHz		x dB Bandwidth	45.142 MHz	
<b>Occupied Bandwidth</b>	Occ BW % Pwr	99.00 %											
36.9936 MHz	x dB	-26.00 dB											
Transmit Freq Error	58.341 kHz												
x dB Bandwidth	45.142 MHz												
5550 MHz	<p>Agilent R T</p> <p>Ch Freq 5.55 GHz Trng Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.55 GHz Span 100 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <table border="1"> <tr> <td><b>Occupied Bandwidth</b></td> <td>Occ BW % Pwr</td> <td>99.00 %</td> </tr> <tr> <td>36.8675 MHz</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>Transmit Freq Error</td> <td>52.565 kHz</td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>44.781 MHz</td> <td></td> </tr> </table> <p>Freq/Channel: Center Freq 5.55000000 GHz, Start Freq 5.50000000 GHz, Stop Freq 5.60000000 GHz, CF Step 10.00000000 MHz, Freq Offset 0.00000000 Hz, Signal Track On</p>	<b>Occupied Bandwidth</b>	Occ BW % Pwr	99.00 %	36.8675 MHz	x dB	-26.00 dB	Transmit Freq Error	52.565 kHz		x dB Bandwidth	44.781 MHz	
<b>Occupied Bandwidth</b>	Occ BW % Pwr	99.00 %											
36.8675 MHz	x dB	-26.00 dB											
Transmit Freq Error	52.565 kHz												
x dB Bandwidth	44.781 MHz												
5670 MHz	<p>Agilent R T</p> <p>Ch Freq 5.67 GHz Trng Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.67 GHz Span 100 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <table border="1"> <tr> <td><b>Occupied Bandwidth</b></td> <td>Occ BW % Pwr</td> <td>99.00 %</td> </tr> <tr> <td>36.8272 MHz</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>Transmit Freq Error</td> <td>-87.465 kHz</td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>44.342 MHz</td> <td></td> </tr> </table> <p>Freq/Channel: Center Freq 5.67000000 GHz, Start Freq 5.62000000 GHz, Stop Freq 5.72000000 GHz, CF Step 10.00000000 MHz, Freq Offset 0.00000000 Hz, Signal Track On</p>	<b>Occupied Bandwidth</b>	Occ BW % Pwr	99.00 %	36.8272 MHz	x dB	-26.00 dB	Transmit Freq Error	-87.465 kHz		x dB Bandwidth	44.342 MHz	
<b>Occupied Bandwidth</b>	Occ BW % Pwr	99.00 %											
36.8272 MHz	x dB	-26.00 dB											
Transmit Freq Error	-87.465 kHz												
x dB Bandwidth	44.342 MHz												

Mode 5: IEEE 802.11ac 80MHz Link Mode	
5290 MHz	<p>Agilent R T</p> <p>Ch Freq 5.29 GHz Trng Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/ Offst 11.6 dB</p> <p>Center 5.29 GHz Span 100 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 75.8923 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -106.511 kHz x dB Bandwidth 86.330 MHz</p> <p>Freq/Channel</p> <p>Center Freq 5.29000000 GHz</p> <p>Start Freq 5.24000000 GHz</p> <p>Stop Freq 5.34000000 GHz</p> <p>CF Step 10.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
5530 MHz	<p>Agilent R T</p> <p>Ch Freq 5.53 GHz Trng Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/ Offst 11.6 dB</p> <p>Center 5.53 GHz Span 100 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 75.9178 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 107.111 kHz x dB Bandwidth 86.075 MHz</p> <p>Freq/Channel</p> <p>Center Freq 5.53000000 GHz</p> <p>Start Freq 5.48000000 GHz</p> <p>Stop Freq 5.58000000 GHz</p> <p>CF Step 10.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
5610 MHz	<p>Agilent R T</p> <p>Ch Freq 5.61 GHz Trng Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/ Offst 11.6 dB</p> <p>Center 5.61 GHz Span 100 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 75.9996 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -122.691 kHz x dB Bandwidth 86.399 MHz</p> <p>Freq/Channel</p> <p>Center Freq 5.61000000 GHz</p> <p>Start Freq 5.56000000 GHz</p> <p>Stop Freq 5.66000000 GHz</p> <p>CF Step 10.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>

Antenna 1

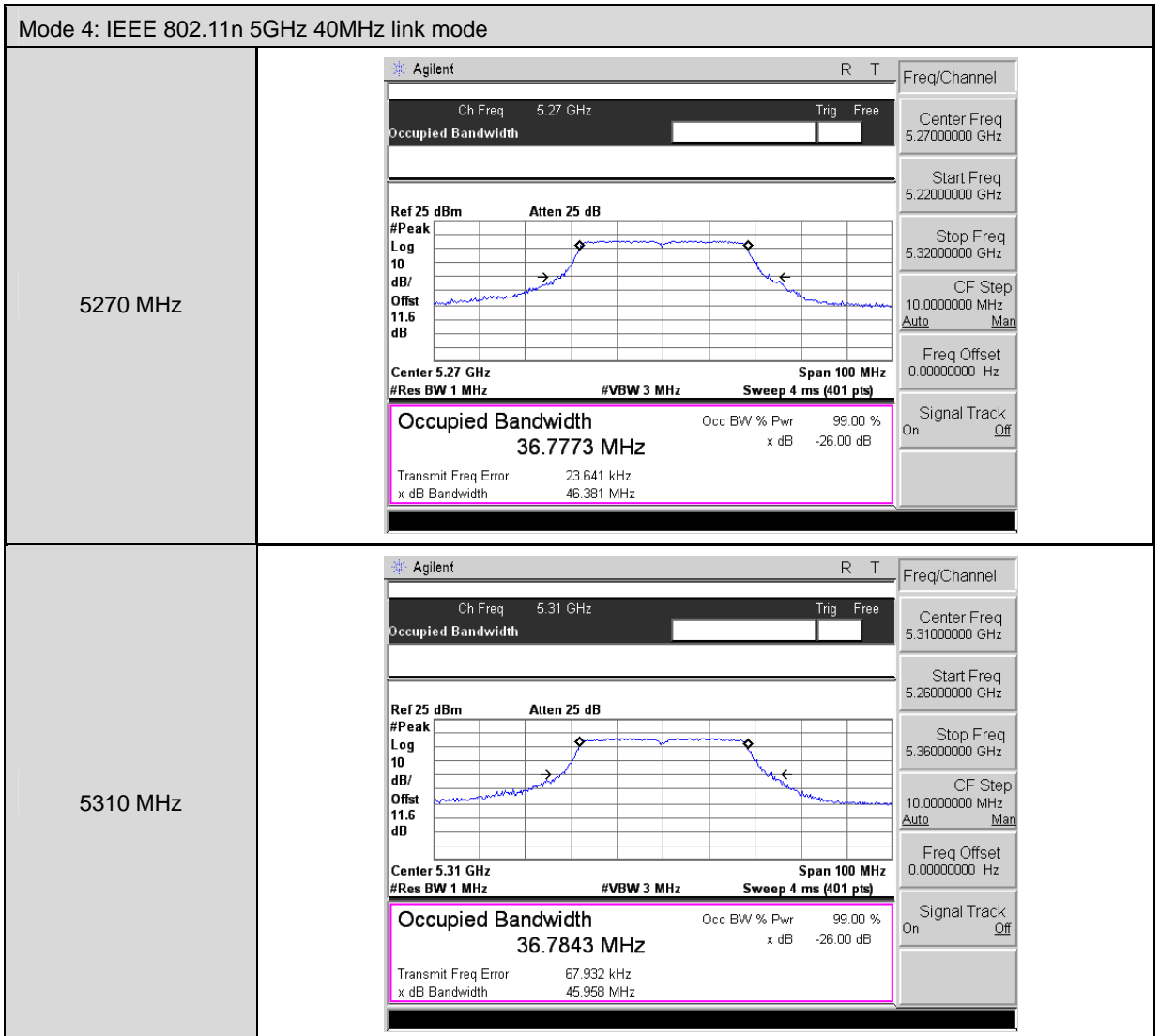
Mode 2: IEEE 802.11a Link Mode	
5260 MHz	<p>Agilent R T</p> <p>Ch Freq 5.26 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.26 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth</b> 18.0890 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 36.146 kHz x dB Bandwidth 23.530 MHz</p> <p>Freq/Channel: Center Freq 5.2600000 GHz, Start Freq 5.2350000 GHz, Stop Freq 5.2850000 GHz, CF Step 5.0000000 MHz (Auto/Man), Freq Offset 0.0000000 Hz, Signal Track On/Off</p>
5280 MHz	<p>Agilent R T</p> <p>Ch Freq 5.28 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.28 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth</b> 18.0581 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 48.265 kHz x dB Bandwidth 24.320 MHz</p> <p>Freq/Channel: Center Freq 5.2800000 GHz, Start Freq 5.2550000 GHz, Stop Freq 5.3050000 GHz, CF Step 5.0000000 MHz (Auto/Man), Freq Offset 0.0000000 Hz, Signal Track On/Off</p>
5320 MHz	<p>Agilent R T</p> <p>Ch Freq 5.32 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.32 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth</b> 18.0595 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 82.772 kHz x dB Bandwidth 24.697 MHz</p> <p>Freq/Channel: Center Freq 5.3200000 GHz, Start Freq 5.2950000 GHz, Stop Freq 5.3450000 GHz, CF Step 5.0000000 MHz (Auto/Man), Freq Offset 0.0000000 Hz, Signal Track On/Off</p>

Mode 2: IEEE 802.11a Link Mode	
5500 MHz	<p>Agilent R T</p> <p>Ch Freq 5.5 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.5 GHz Span 50 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 18.0985 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 39.068 kHz</p> <p>x dB Bandwidth 24.698 MHz</p> <p>Freq/Channel</p> <p>Center Freq 5.5000000 GHz</p> <p>Start Freq 5.4750000 GHz</p> <p>Stop Freq 5.5250000 GHz</p> <p>CF Step 5.0000000 MHz Auto Man</p> <p>Freq Offset 0.0000000 Hz</p> <p>Signal Track On Off</p>
5560 MHz	<p>Agilent R T</p> <p>Ch Freq 5.56 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.56 GHz Span 50 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 18.0942 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 31.090 kHz</p> <p>x dB Bandwidth 24.584 MHz</p> <p>Freq/Channel</p> <p>Center Freq 5.5600000 GHz</p> <p>Start Freq 5.5350000 GHz</p> <p>Stop Freq 5.5850000 GHz</p> <p>CF Step 5.0000000 MHz Auto Man</p> <p>Freq Offset 0.0000000 Hz</p> <p>Signal Track On Off</p>
5700 MHz	<p>Agilent R T</p> <p>Ch Freq 5.7 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.7 GHz Span 50 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 18.0360 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 47.042 kHz</p> <p>x dB Bandwidth 23.507 MHz</p> <p>Freq/Channel</p> <p>Center Freq 5.7000000 GHz</p> <p>Start Freq 5.6750000 GHz</p> <p>Stop Freq 5.7250000 GHz</p> <p>CF Step 5.0000000 MHz Auto Man</p> <p>Freq Offset 0.0000000 Hz</p> <p>Signal Track On Off</p>



Mode 3: IEEE 802.11n 5GHz 20MHz link mode	
5260 MHz	<p>Agilent R T</p> <p>Ch Freq 5.26 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.26 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 19.0764 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 35.533 kHz x dB Bandwidth 25.152 MHz</p> <p>Freq/Channel: Center Freq 5.26000000 GHz, Start Freq 5.23500000 GHz, Stop Freq 5.28500000 GHz, CF Step 5.00000000 MHz, Freq Offset 0.00000000 Hz, Signal Track On</p>
5280 MHz	<p>Agilent R T</p> <p>Ch Freq 5.28 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.28 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 19.0469 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 24.262 kHz x dB Bandwidth 24.979 MHz</p> <p>Freq/Channel: Center Freq 5.28000000 GHz, Start Freq 5.25500000 GHz, Stop Freq 5.30500000 GHz, CF Step 5.00000000 MHz, Freq Offset 0.00000000 Hz, Signal Track On</p>
5320 MHz	<p>Agilent R T</p> <p>Ch Freq 5.32 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.32 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 18.9579 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 41.667 kHz x dB Bandwidth 25.000 MHz</p> <p>Freq/Channel: Center Freq 5.32000000 GHz, Start Freq 5.29500000 GHz, Stop Freq 5.34500000 GHz, CF Step 5.00000000 MHz, Freq Offset 0.00000000 Hz, Signal Track On</p>

Mode 3: IEEE 802.11n 5GHz 20MHz link mode	
5500 MHz	<p>Agilent R T</p> <p>Ch Freq 5.5 GHz Trng Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.5 GHz Span 50 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 19.0170 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 25.587 kHz x dB Bandwidth 25.121 MHz</p> <p>Freq/Channel: Center Freq 5.5000000 GHz, Start Freq 5.4750000 GHz, Stop Freq 5.5250000 GHz, CF Step 5.0000000 MHz, Freq Offset 0.0000000 Hz, Signal Track On</p>
5560 MHz	<p>Agilent R T</p> <p>Ch Freq 5.56 GHz Trng Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.56 GHz Span 50 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 18.9736 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 17.734 kHz x dB Bandwidth 24.647 MHz</p> <p>Freq/Channel: Center Freq 5.5600000 GHz, Start Freq 5.5350000 GHz, Stop Freq 5.5850000 GHz, CF Step 5.0000000 MHz, Freq Offset 0.0000000 Hz, Signal Track On</p>
5700 MHz	<p>Agilent R T</p> <p>Ch Freq 5.7 GHz Trng Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.7 GHz Span 50 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 19.0390 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 54.946 kHz x dB Bandwidth 24.995 MHz</p> <p>Freq/Channel: Center Freq 5.7000000 GHz, Start Freq 5.6750000 GHz, Stop Freq 5.7250000 GHz, CF Step 5.0000000 MHz, Freq Offset 0.0000000 Hz, Signal Track On</p>



Mode 4: IEEE 802.11n 5GHz 40MHz link mode	
5510 MHz	<p>Agilent R T</p> <p>Ch Freq 5.51 GHz Trng Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/ Offst 11.6 dB</p> <p>Center 5.51 GHz Span 100 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 36.9429 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 65.539 kHz x dB Bandwidth 45.100 MHz</p> <p>Freq/Channel</p> <p>Center Freq 5.51000000 GHz</p> <p>Start Freq 5.46000000 GHz</p> <p>Stop Freq 5.56000000 GHz</p> <p>CF Step 10.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
5550 MHz	<p>Agilent R T</p> <p>Ch Freq 5.55 GHz Trng Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/ Offst 11.6 dB</p> <p>Center 5.55 GHz Span 100 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 36.9827 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -36.710 kHz x dB Bandwidth 46.049 MHz</p> <p>Freq/Channel</p> <p>Center Freq 5.55000000 GHz</p> <p>Start Freq 5.50000000 GHz</p> <p>Stop Freq 5.60000000 GHz</p> <p>CF Step 10.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
5670 MHz	<p>Agilent R T</p> <p>Ch Freq 5.67 GHz Trng Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/ Offst 11.6 dB</p> <p>Center 5.67 GHz Span 100 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 36.9340 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 109.291 kHz x dB Bandwidth 45.326 MHz</p> <p>Freq/Channel</p> <p>Center Freq 5.67000000 GHz</p> <p>Start Freq 5.62000000 GHz</p> <p>Stop Freq 5.72000000 GHz</p> <p>CF Step 10.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>

Mode 5: IEEE 802.11ac 80MHz Link Mode	
5290 MHz	<p>Agilent R T</p> <p>Ch Freq 5.29 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.29 GHz Span 100 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 75.5284 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 111.953 kHz</p> <p>x dB Bandwidth 87.681 MHz</p> <p>Freq/Channel</p> <p>Center Freq 5.29000000 GHz</p> <p>Start Freq 5.24000000 GHz</p> <p>Stop Freq 5.34000000 GHz</p> <p>CF Step 10.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
5530 MHz	<p>Agilent R T</p> <p>Ch Freq 5.53 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.53 GHz Span 100 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 75.7510 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -59.865 kHz</p> <p>x dB Bandwidth 87.676 MHz</p> <p>Freq/Channel</p> <p>Center Freq 5.53000000 GHz</p> <p>Start Freq 5.48000000 GHz</p> <p>Stop Freq 5.58000000 GHz</p> <p>CF Step 10.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
5610 MHz	<p>Agilent R T</p> <p>Ch Freq 5.61 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 25 dBm Atten 25 dB</p> <p>#Peak Log 10 dB/Offset 11.6 dB</p> <p>Center 5.61 GHz Span 100 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 75.7018 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 51.741 kHz</p> <p>x dB Bandwidth 86.642 MHz</p> <p>Freq/Channel</p> <p>Center Freq 5.61000000 GHz</p> <p>Start Freq 5.56000000 GHz</p> <p>Stop Freq 5.66000000 GHz</p> <p>CF Step 10.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>

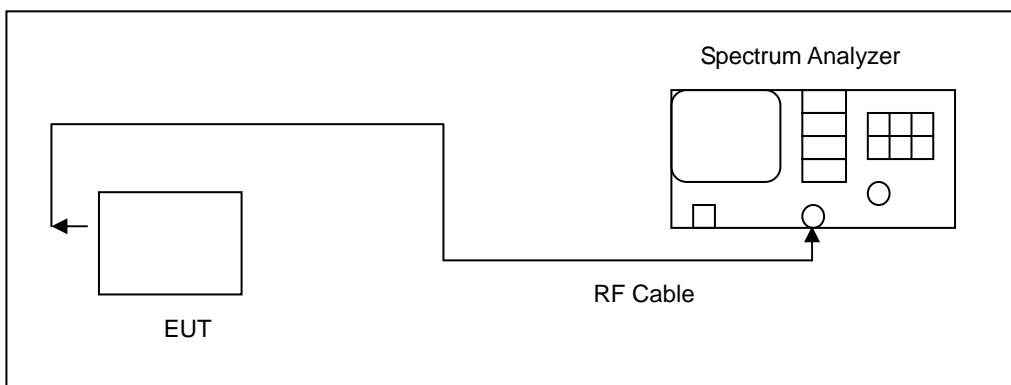
#### 4.4. Peak Power Spectral Density Measurement

##### ■ Limit

Conducted power spectral density

Frequency Range	FCC Limit
5.250 ~ 5.350 GHz	11 dBm/MHz
5.470 ~ 5.725 GHz	11 dBm/MHz

##### ■ 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-LITE			
Test Item	Conducted power spectral density			
Test Mode	Mode 2: IEEE 802.11a Link Mode			
Date of Test	06/18/2015			
Frequency (MHz)	Antenna 0 (dBm/MHz)	Antenna 1 (dBm/MHz)	Antenna 0+1 (dBm/MHz)	FCC Limit (dBm/MHz)
5260	5.372	5.243	8.435	< 11
5280	5.593	5.379	8.614	
5320	5.170	6.470	8.995	
5500	7.191	6.982	10.214	< 11
5580	7.187	6.153	9.827	
5700	5.281	5.902	8.729	

Model Number	UAP-AC-LITE			
Test Item	Conducted power spectral density			
Test Mode	Mode 3: IEEE 802.11n 5GHz 20MHz link mode			
Date of Test	06/18/2015			
Frequency (MHz)	Antenna 0 (dBm/MHz)	Antenna 1 (dBm/MHz)	Antenna 0+1 (dBm/MHz)	FCC Limit (dBm/MHz)
5260	4.906	5.616	8.521	< 11
5280	3.952	5.736	8.180	
5320	4.343	6.436	8.759	
5500	6.454	6.877	9.916	< 11
5580	6.390	6.384	9.632	
5700	4.407	6.822	9.025	

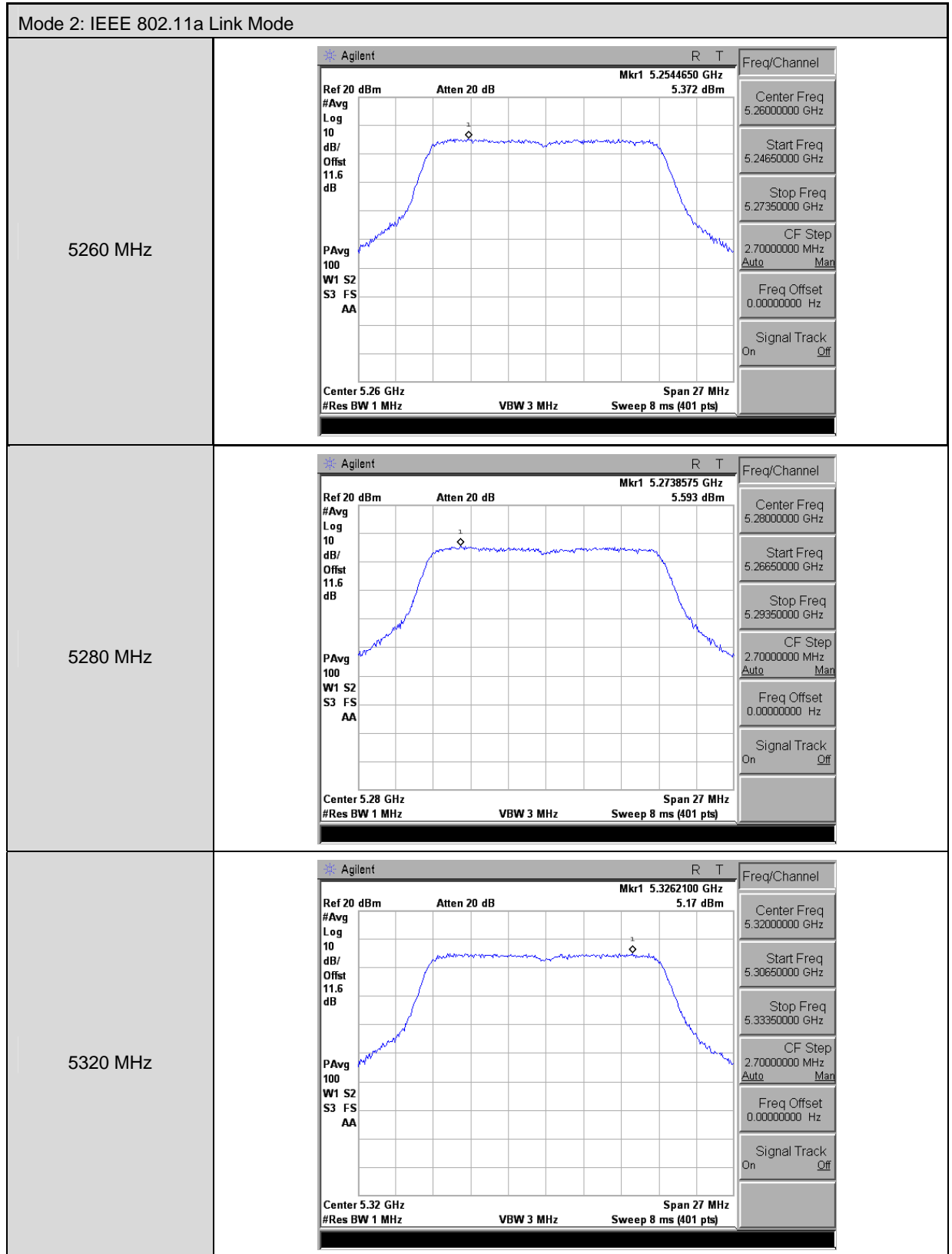
Model Number	UAP-AC-LITE			
Test Item	Conducted power spectral density			
Test Mode	Mode 4: IEEE 802.11n 5GHz 40MHz link mode			
Date of Test	06/18/2015			
Frequency (MHz)	Antenna 0 (dBm/MHz)	Antenna 1 (dBm/MHz)	Antenna 0+1 (dBm/MHz)	FCC Limit (dBm/MHz)
5270	-0.063	1.078	3.835	< 11
5310	-0.243	1.632	4.085	
5510	1.525	2.187	5.159	< 11
5590	1.845	2.103	5.267	
5670	-0.222	1.630	4.093	

Model Number	UAP-AC-LITE			
Test Item	Conducted power spectral density			
Test Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode			
Date of Test	06/18/2015			
Frequency (MHz)	Antenna 0 (dBm/MHz)	Antenna 1 (dBm/MHz)	Antenna 0+1 (dBm/MHz)	FCC Limit (dBm/MHz)
5290	-3.378	-2.120	0.606	< 11
5530	-1.591	-1.537	1.746	< 11
5610	-2.366	-1.642	1.321	



■ Test Graphs

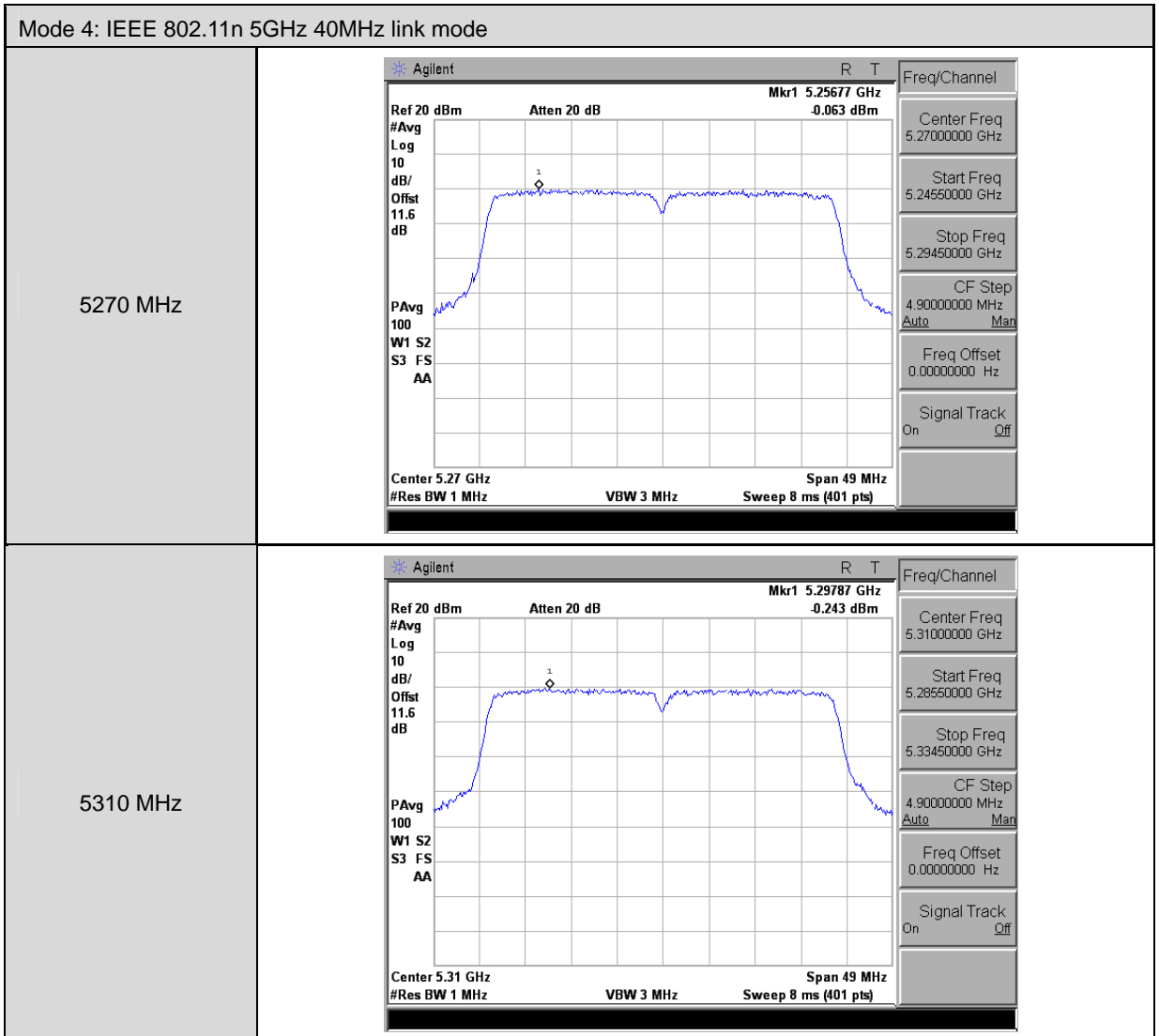
Antenna 0

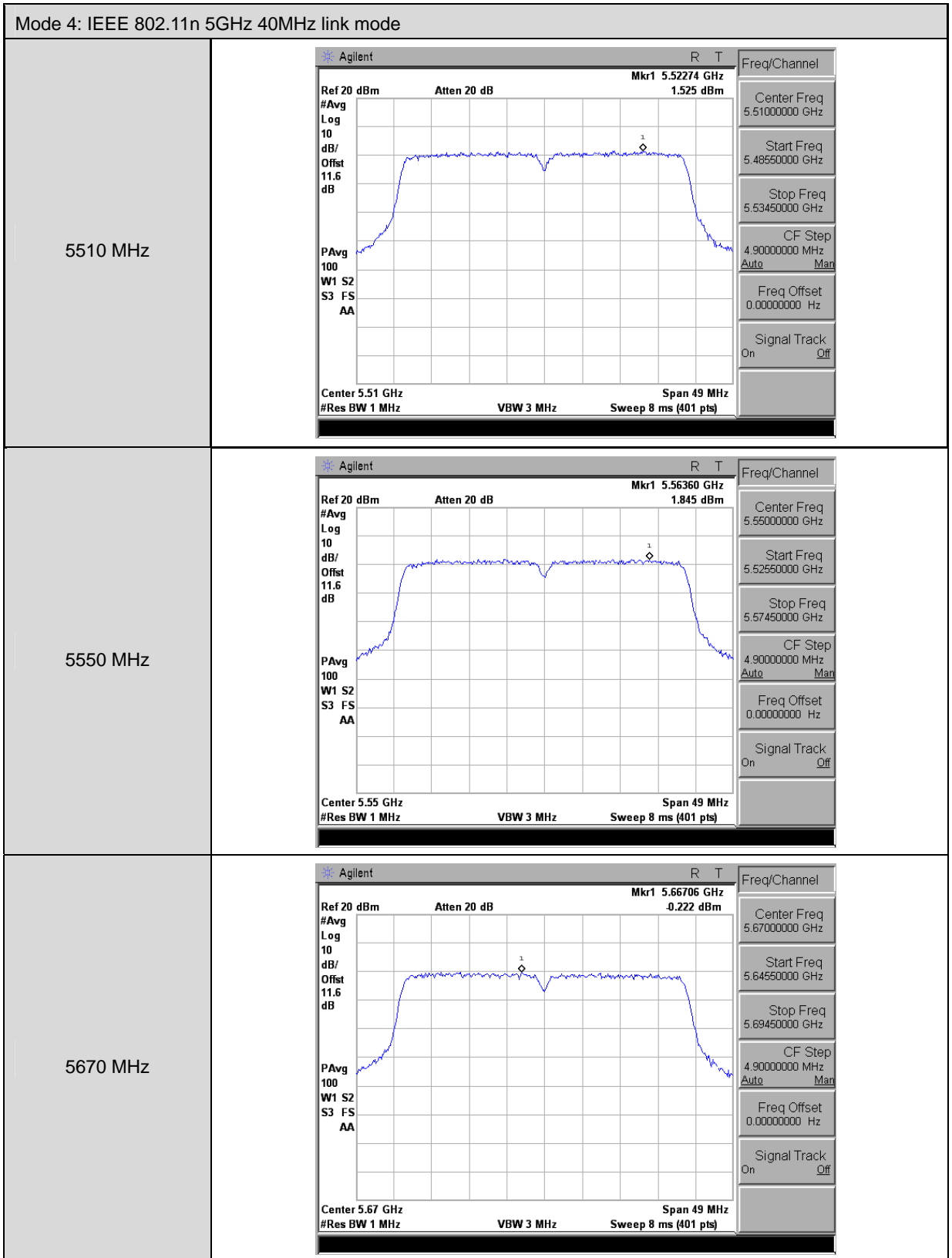


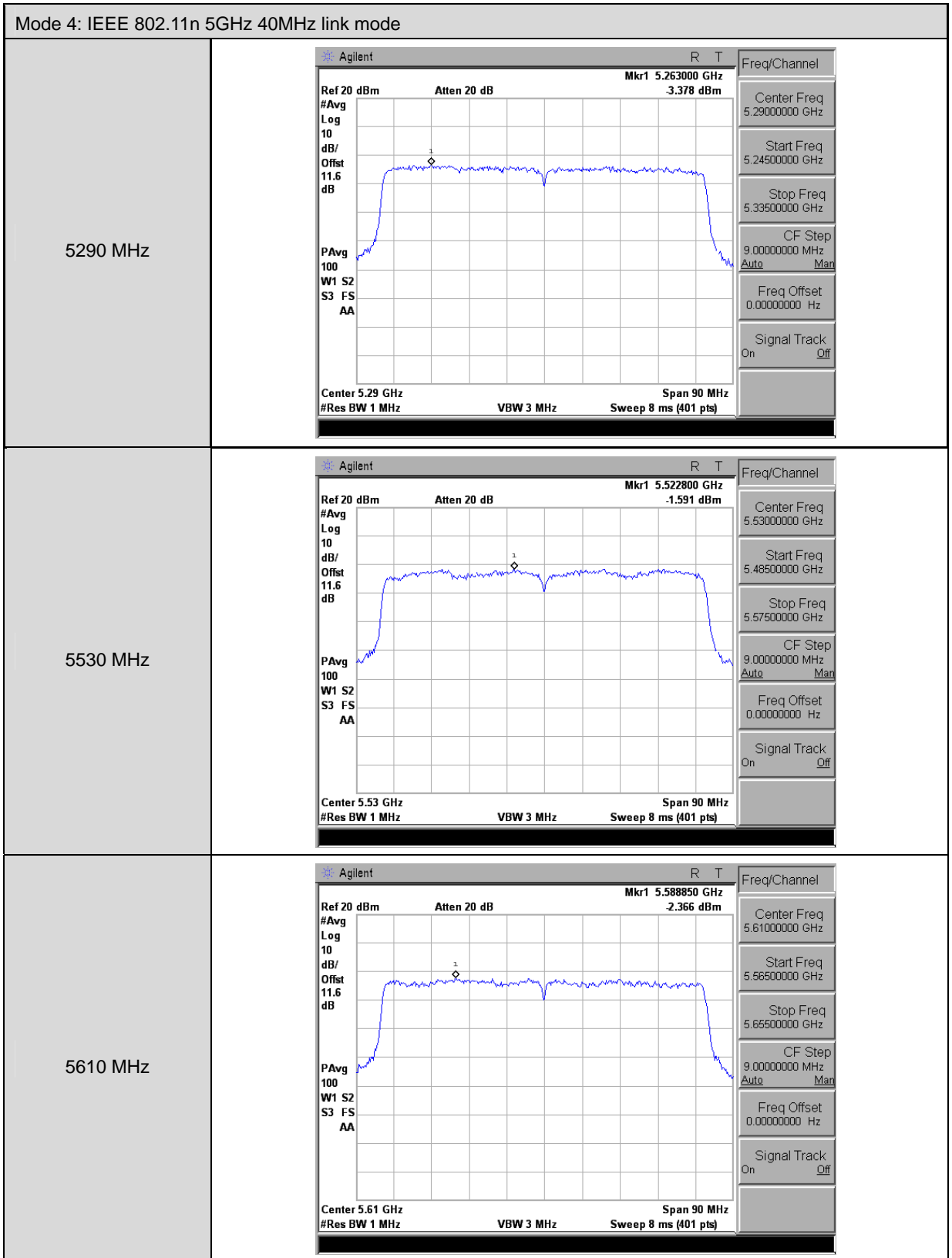
Mode 2: IEEE 802.11a Link Mode	
5500 MHz	<p>Agilent R T            Ref 20 dBm Atten 20 dB Mkr1 5.5031725 GHz 7.191 dBm            #Avg 10            Log dB/ Offst 11.6 dB            PAvg 100            W1 S2            S3 FS            AA            Center 5.5 GHz Span 27 MHz            #Res BW 1 MHz VBW 3 MHz Sweep 8 ms (401 pts)</p> <p>Freq/Channel            Center Freq 5.50000000 GHz            Start Freq 5.48650000 GHz            Stop Freq 5.51350000 GHz            CF Step 2.70000000 MHz            Auto Man            Freq Offset 0.00000000 Hz            Signal Track On Off</p>
5580 MHz	<p>Agilent R T            Ref 20 dBm Atten 20 dB Mkr1 5.5578400 GHz 7.187 dBm            #Avg 10            Log dB/ Offst 11.6 dB            PAvg 100            W1 S2            S3 FS            AA            Center 5.56 GHz Span 27 MHz            #Res BW 1 MHz VBW 3 MHz Sweep 8 ms (401 pts)</p> <p>Freq/Channel            Center Freq 5.56000000 GHz            Start Freq 5.54650000 GHz            Stop Freq 5.57350000 GHz            CF Step 2.70000000 MHz            Auto Man            Freq Offset 0.00000000 Hz            Signal Track On Off</p>
5700 MHz	<p>Agilent R T            Ref 20 dBm Atten 20 dB Mkr1 5.6941275 GHz 5.281 dBm            #Avg 10            Log dB/ Offst 11.6 dB            PAvg 100            W1 S2            S3 FS            AA            Center 5.7 GHz Span 27 MHz            #Res BW 1 MHz VBW 3 MHz Sweep 8 ms (401 pts)</p> <p>Freq/Channel            Center Freq 5.70000000 GHz            Start Freq 5.68650000 GHz            Stop Freq 5.71350000 GHz            CF Step 2.70000000 MHz            Auto Man            Freq Offset 0.00000000 Hz            Signal Track On Off</p>

Mode 3: IEEE 802.11n 5GHz 20MHz link mode	
5260 MHz	
5280 MHz	
5320 MHz	

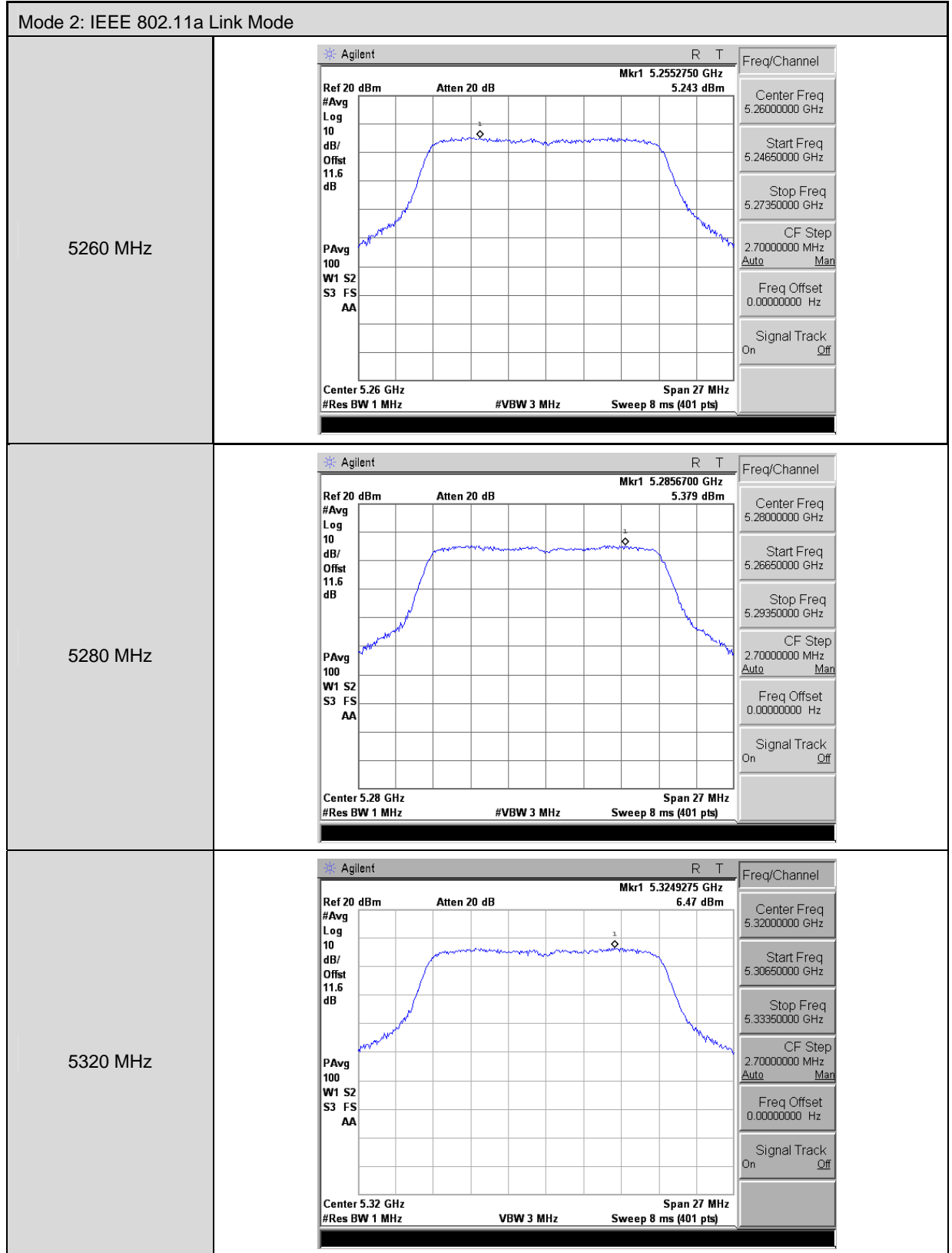
Mode 3: IEEE 802.11n 5GHz 20MHz link mode	
5500 MHz	<p>Agilent R T            Ref 20 dBm Atten 20 dB Mkr1 5.50413 GHz 6.454 dBm            #Avg Log 10 dB/ Offst 11.6 dB            PAvg 100 W1 S2 S3 FS AA            Center 5.5 GHz Span 28 MHz            #Res BW 1 MHz VBW 3 MHz Sweep 8 ms (401 pts)</p> <p>Freq/Channel            Center Freq 5.5000000 GHz            Start Freq 5.4860000 GHz            Stop Freq 5.5140000 GHz            CF Step 2.8000000 MHz            Auto Man            Freq Offset 0.0000000 Hz            Signal Track On Off</p>
5580 MHz	<p>Agilent R T            Ref 20 dBm Atten 20 dB Mkr1 5.56385 GHz 6.39 dBm            #Avg Log 10 dB/ Offst 11.6 dB            PAvg 100 W1 S2 S3 FS AA            Center 5.56 GHz Span 28 MHz            #Res BW 1 MHz VBW 3 MHz Sweep 8 ms (401 pts)</p> <p>Freq/Channel            Center Freq 5.5600000 GHz            Start Freq 5.5460000 GHz            Stop Freq 5.5740000 GHz            CF Step 2.8000000 MHz            Auto Man            Freq Offset 0.0000000 Hz            Signal Track On Off</p>
5700 MHz	<p>Agilent R T            Ref 20 dBm Atten 20 dB Mkr1 5.69440 GHz 4.407 dBm            #Avg Log 10 dB/ Offst 11.6 dB            PAvg 100 W1 S2 S3 FS AA            Center 5.7 GHz Span 28 MHz            #Res BW 1 MHz VBW 3 MHz Sweep 8 ms (401 pts)</p> <p>Freq/Channel            Center Freq 5.7000000 GHz            Start Freq 5.6860000 GHz            Stop Freq 5.7140000 GHz            CF Step 2.8000000 MHz            Auto Man            Freq Offset 0.0000000 Hz            Signal Track On Off</p>



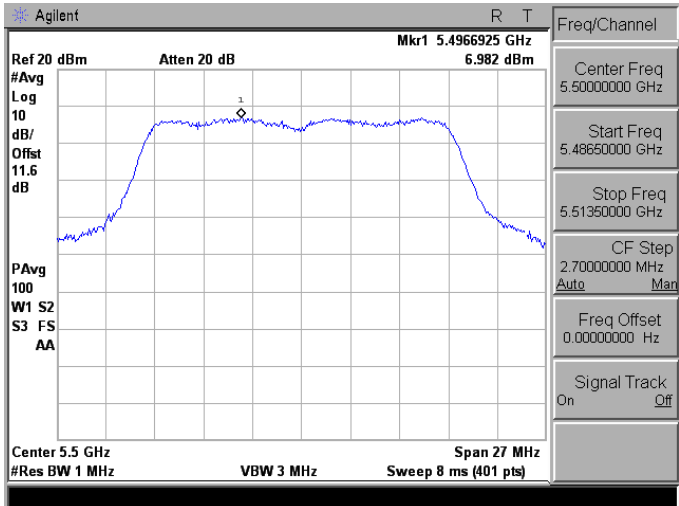
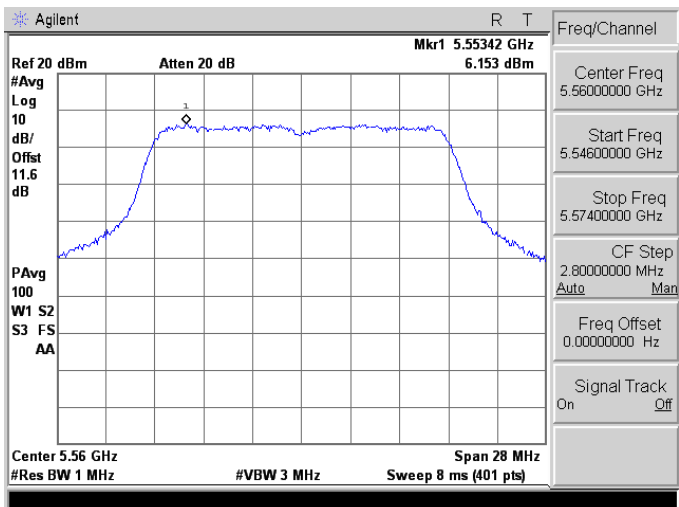
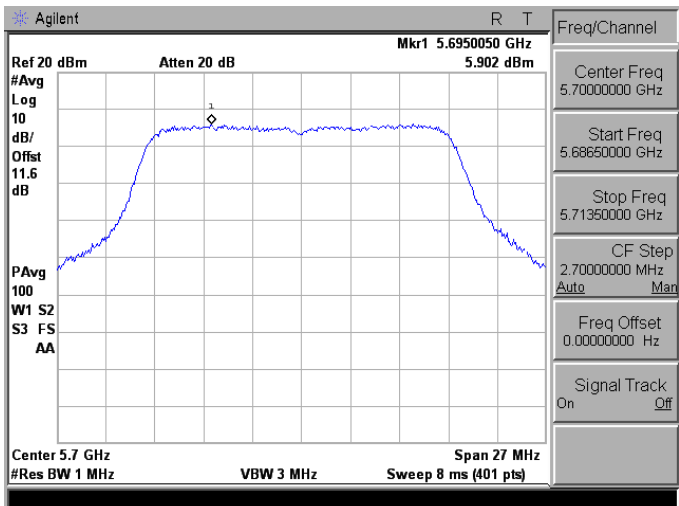




Antenna 0

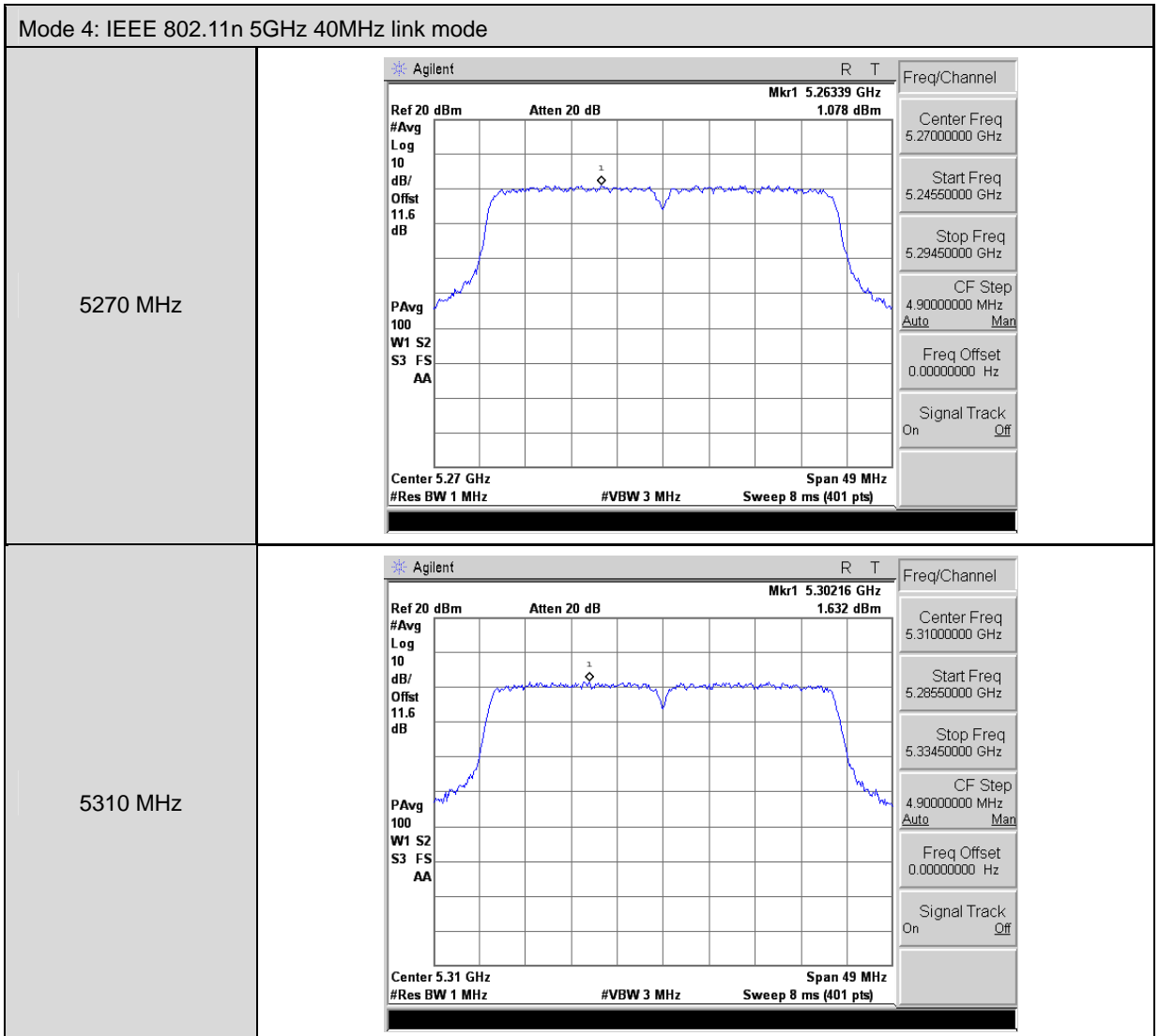




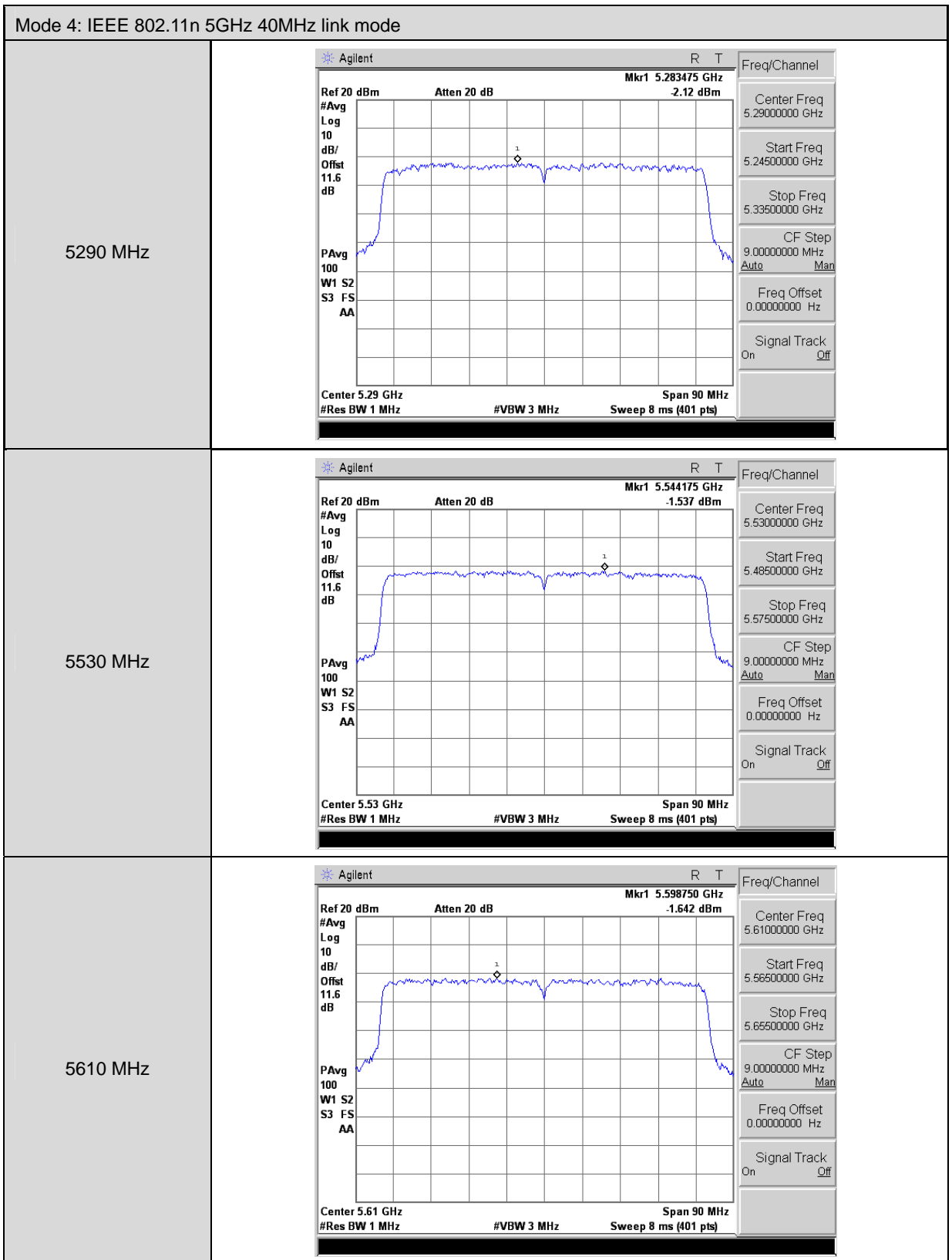
Mode 2: IEEE 802.11a Link Mode	
5500 MHz	
5580 MHz	
5700 MHz	

Mode 3: IEEE 802.11n 5GHz 20MHz link mode	
5260 MHz	
5280 MHz	
5320 MHz	

Mode 3: IEEE 802.11n 5GHz 20MHz link mode	
5500 MHz	
5580 MHz	
5700 MHz	



Mode 4: IEEE 802.11n 5GHz 40MHz link mode	
5510 MHz	<p>Agilent R T            Ref 20 dBm Atten 20 dB Mkr1 5.49751 GHz            #Avg Log 10 dB/Offst 11.6 dB            PAvg 100 W1 S2 S3 FS AA            Center 5.51 GHz Span 49 MHz            #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts)</p> <p>Freq/Channel            Center Freq 5.51000000 GHz            Start Freq 5.48500000 GHz            Stop Freq 5.53450000 GHz            CF Step 4.90000000 MHz            Auto Man            Freq Offset 0.00000000 Hz            Signal Track On Off</p>
5550 MHz	<p>Agilent R T            Ref 20 dBm Atten 20 dB Mkr1 5.55221 GHz            #Avg Log 10 dB/Offst 11.6 dB            PAvg 100 W1 S2 S3 FS AA            Center 5.55 GHz Span 49 MHz            #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts)</p> <p>Freq/Channel            Center Freq 5.55000000 GHz            Start Freq 5.52500000 GHz            Stop Freq 5.57450000 GHz            CF Step 4.90000000 MHz            Auto Man            Freq Offset 0.00000000 Hz            Signal Track On Off</p>
5670 MHz	<p>Agilent R T            Ref 20 dBm Atten 20 dB Mkr1 5.65934 GHz            #Avg Log 10 dB/Offst 11.6 dB            PAvg 100 W1 S2 S3 FS AA            Center 5.67 GHz Span 49 MHz            #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts)</p> <p>Freq/Channel            Center Freq 5.67000000 GHz            Start Freq 5.64500000 GHz            Stop Freq 5.69450000 GHz            CF Step 4.90000000 MHz            Auto Man            Freq Offset 0.00000000 Hz            Signal Track On Off</p>

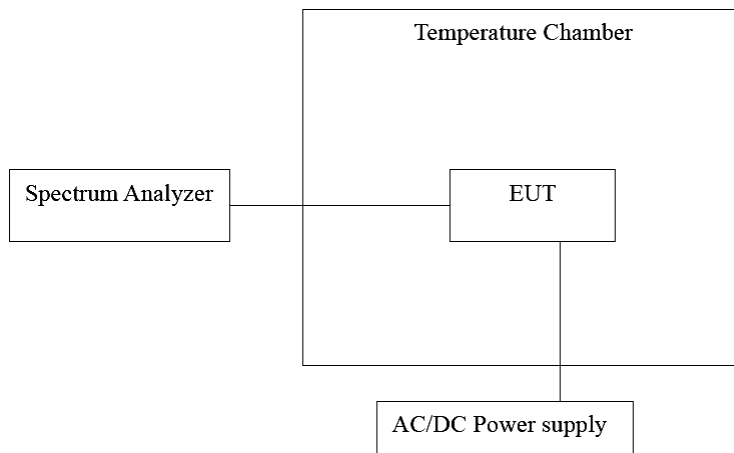


#### 4.5. Frequency Stability Measurement

■ **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**

Model Number	UAP-AC-LITE					
Test Item	Frequency Stability					
Test Mode	Mode 2: IEEE 802.11a Link Mode					
Date of Test	06/18/2015					
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5280 MHz	-10	120	5280.0354	35400	6.705	Pass
	0		5280.0519	51900	9.830	Pass
	10		5280.0360	36000	6.818	Pass
	20		5280.0375	37500	7.102	Pass
	30		5280.0237	23700	4.489	Pass
	40		5280.0472	47200	8.939	Pass
	50		5280.0531	53100	10.057	Pass
	60		5280.0294	29400	5.568	Pass
5560 MHz	-10	120	5560.0752	75200	13.525	Pass
	0		5560.0660	66000	11.871	Pass
	10		5560.0932	93200	16.763	Pass
	20		5560.0750	75000	13.489	Pass
	30		5560.0741	74100	13.327	Pass
	40		5560.0879	87900	15.809	Pass
	50		5560.0662	66200	11.906	Pass
	60		5560.0860	86000	15.468	Pass
	70	5560.0842	84200	15.144	Pass	

Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5280 MHz	20	138.00	5280.0475	47500	8.996	Pass
		120.00	5280.0375	37500	7.102	Pass
		102.00	5280.0308	30800	5.833	Pass
5560 MHz	20	138.00	5560.0651	65100	11.709	Pass
		120.00	5560.0750	75000	13.489	Pass
		102.00	5560.0777	77700	13.975	Pass



Model Number	UAP-AC-LITE					
Test Item	Frequency Stability					
Test Mode	Mode 3: IEEE 802.11n 5GHz 20MHz link mode					
Date of Test	06/18/2015					
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5280 MHz	-10	120	5279.9892	-10800	-2.045	Pass
	0		5280.0087	8700	1.648	Pass
	10		5280.0027	2700	0.511	Pass
	20		5280.0029	2900	0.549	Pass
	30		5279.9915	-8500	-1.610	Pass
	40		5280.0025	2500	0.473	Pass
	50		5280.0166	16600	3.144	Pass
	60		5279.9891	-10900	-2.064	Pass
5560 MHz	-10	120	5559.9778	-22200	-3.993	Pass
	0		5559.9426	-57400	-10.324	Pass
	10		5559.9594	-40600	-7.302	Pass
	20		5559.9625	-37500	-6.745	Pass
	30		5559.9713	-28700	-5.162	Pass
	40		5559.9520	-48000	-8.633	Pass
	50		5559.9802	-19800	-3.561	Pass
	60		5559.9592	-40800	-7.338	Pass
70	5559.9567	-43300	-7.788	Pass		

Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5280 MHz	20	138.00	5280.0210	21000	3.977	Pass
		120.00	5280.0193	19300	3.655	Pass
		102.00	5280.0035	3500	0.663	Pass
5560 MHz	20	138.00	5559.9513	-48700	-8.759	Pass
		120.00	5559.9625	-37500	-6.745	Pass
		102.00	5559.9781	-21900	-3.939	Pass

Model Number	UAP-AC-LITE					
Test Item	Frequency Stability					
Test Mode	Mode 4: IEEE 802.11n 5GHz 40MHz link mode					
Date of Test	06/18/2015					
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5310 MHz	-10	120	5309.9905	-9500	-1.789	Pass
	0		5309.9866	-13400	-2.524	Pass
	10		5309.9976	-2400	-0.452	Pass
	20		5310.0241	24100	4.539	Pass
	30		5310.0172	17200	3.239	Pass
	40		5309.9899	-10100	-1.902	Pass
	50		5310.0060	6000	1.130	Pass
	60		5309.9832	-16800	-3.164	Pass
5550 MHz	-10	120	5549.9396	-60400	-10.883	Pass
	0		5549.9310	-69000	-12.432	Pass
	10		5549.9512	-48800	-8.793	Pass
	20		5549.9375	-62500	-11.261	Pass
	30		5549.9256	-74400	-13.405	Pass
	40		5549.9424	-57600	-10.378	Pass
	50		5549.9330	-67000	-12.072	Pass
	60		5549.9200	-80000	-14.414	Pass
	70	5549.9239	-76100	-13.712	Pass	

Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5310 MHz	20	138.00	5310.0167	16700	3.145	Pass
		120.00	5310.0000	0	0.000	Pass
		102.00	5310.0142	14200	2.674	Pass
5550 MHz	20	138.00	5549.9226	-77400	-13.946	Pass
		120.00	5549.9375	-62500	-11.261	Pass
		102.00	5549.9252	-74800	-13.477	Pass

Model Number	UAP-AC-LITE					
Test Item	Frequency Stability					
Test Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode					
Date of Test	06/18/2015					
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5290 MHz	-10	120	5289.8523	-147700	-27.921	Pass
	0		5289.8796	-120400	-22.760	Pass
	10		5289.8569	-143100	-27.051	Pass
	20		5289.8872	-112800	-21.323	Pass
	30		5289.8935	-106500	-20.132	Pass
	40		5289.8695	-130500	-24.669	Pass
	50		5289.8842	-115800	-21.890	Pass
	60		5289.8852	-114800	-21.701	Pass
5530 MHz	-10	120	5530.1292	129200	23.363	Pass
	0		5530.1103	110300	19.946	Pass
	10		5530.1125	112500	20.344	Pass
	20		5530.1123	112300	20.307	Pass
	30		5530.1038	103800	18.770	Pass
	40		5530.1040	104000	18.807	Pass
	50		5530.1128	112800	20.398	Pass
	60		5530.1107	110700	20.018	Pass
	70		5530.1129	112900	20.416	Pass

Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5290 MHz	20	138.00	5289.8555	-144500	-27.316	Pass
		120.00	5289.8750	-125000	-23.629	Pass
		102.00	5289.8806	-119400	-22.571	Pass
5530 MHz	20	138.00	5529.8551	-144900	-26.203	Pass
		120.00	5529.8753	-124700	-22.550	Pass
		102.00	5529.8834	-116600	-21.085	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 antenna. 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

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

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