

FCC 47 CFR PART 15 SUBPART E

Product Type : Mobile Hot Spot
Applicant : Netgear Inc.
Address : 350 East Plumeria Drive, San Jose, CA 95134
Trade Name : NETGEAR
Model Number : AC791L
Test Specification : FCC 47 CFR PART 15 SUBPART E: Oct., 2014
ANSI C63.10-2009
Application Purpose : Original
Receive Date : Apr. 20, 2015
Test Period : May 05 ~ Jun. 24, 2015
Issue Date : Jun. 24, 2015

Issue by

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

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Revision History

Rev.	Issue Date	Revisions	Revised By
00	Jun. 12, 2015	Initial Issue	
01	Jun. 24, 2015	Revised report information.	Snow Wang

Verification of Compliance

Issued Date: 06/24/2015

Product Type : Mobile Hot Spot
Applicant : Netgear Inc.
Address : 350 East Plumeria Drive, San Jose, CA 95134
Trade Name : NETGEAR
Model Number : AC791L
FCC ID : PY3AC791L
EUT Rated Voltage : DC 5V, 1A
Test Voltage : 120 Vac / 60 Hz, DC 3.50 / DC 3.80 / DC 4.35
Applicable Standard : FCC 47 CFR PART 15 SUBPART E: Oct., 2014
ANSI C63.10-2009

Test Result : Complied

Application Purpose : Original

Performing Lab. : A Test Lab Techno Corp.

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



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

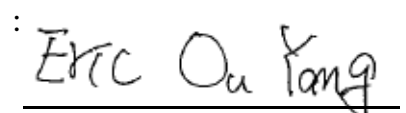
Approved By :



(Manager)

(Fly Lu)

Reviewed By :



(Testing Engineer)

(Eric Ou Yang)

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1 General Information

1.1. Summary of Test Result

Standard	Item	Result	Remark
FCC			
15.407(b)(6) 15.207	AC Power Conducted Emission	PASS	---
15.407(b) 15.205 / 15.209	Transmitter Radiated Emissions	PASS	---
15.407(a)	Maximum Conducted Output Power	PASS	---
15.407(a)	26dB RF Bandwidth	Reference	---
15.215(c)	20dB RF Bandwidth	Reference	---
15.407(a)	6dB RF Bandwidth	PASS	-----
15.407(a)	Peak Power Spectral Density	PASS	---
15.407(g)	Frequency Stability	PASS	---
15.407(a) 15.203	Antenna Requirement	PASS	---

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

1.2. Measurement Uncertainty

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

2 EUT Description

Product Type	Mobile Hot Spot			
Trade Name	NETGEAR			
Model No.	AC791L			
Applicant	Netgear Inc. 350 East Plumeria Drive, San Jose, CA 95134			
Manufacturer	Netgear Inc. 350 East Plumeria Drive, San Jose, CA 95134			
FCC ID	PY3AC791L			
Frequency Range	Mode	Band	Frequency Range (MHz)	Number of Channels
	IEEE 802.11a	U-NII Band I	5180 – 5240	4 Channels
		U-NII Band III	5745 – 5825	5 Channels
	IEEE 802.11n 20 MHz	U-NII Band I	5180 – 5220	3 Channels
		U-NII Band III	5745 – 5825	5 Channels
	IEEE 802.11n 40 MHz	U-NII Band I	5190 – 5230	2 Channels
		U-NII Band III	5755 – 5795	2 Channels
	IEEE 802.11ac 80 MHz	U-NII Band I	5210	1 Channel
		U-NII Band III	5775	1 Channel
Modulation Type	OFDM			
Antenna Type	Internal IFA type			
Antenna Max. Gain	5 dBi			
Antenna Delivery	IEEE 802.11a : 1TX + 1RX IEEE 802.11n 20 MHz / 40 MHz / ac 80 MHz : 2TX + 2RX			
Equipment Type	Master (without Radar detection)			
RF Output Power	IEEE 802.11a	U-NII Band I:	0.007 W /	8.25 dBm
	IEEE 802.11a	U-NII Band III:	0.005 W /	6.59 dBm
	IEEE 802.11n 20 MHz	U-NII Band I:	0.013 W /	11.07 dBm
	IEEE 802.11n 20 MHz	U-NII Band III:	0.008 W /	9.27 dBm
	IEEE 802.11n 40 MHz	U-NII Band I:	0.012 W /	10.72 dBm
	IEEE 802.11n 40 MHz	U-NII Band III:	0.009 W /	9.39 dBm
	IEEE 802.11ac 80 MHz	U-NII Band I:	0.013 W /	11.10 dBm
	IEEE 802.11ac 80 MHz	U-NII Band III:	0.008 W /	9.11 dBm

Power adapter List				
Power adapter(1)	Trade Name	NETGEAR	Model Number	MU05BT050100-A1
	I/P: 100-240VAC, 50/60Hz, 0.15A			
	O/P: 5VDC, 1A			
	Cable out: Shielded, 1.0m, Detachable at Power Adapter			
Power adapter(2)	Trade Name	NETGEAR	Model Number	AD2038F20
	I/P: 100-240VAC, 50/60Hz, 0.13A			
	O/P: 5VDC, 1A			
	Cable out: Shielded, 1.0m, Detachable at Power Adapter			

3 Test Methodology

3.1. Mode of Operation

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

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

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

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

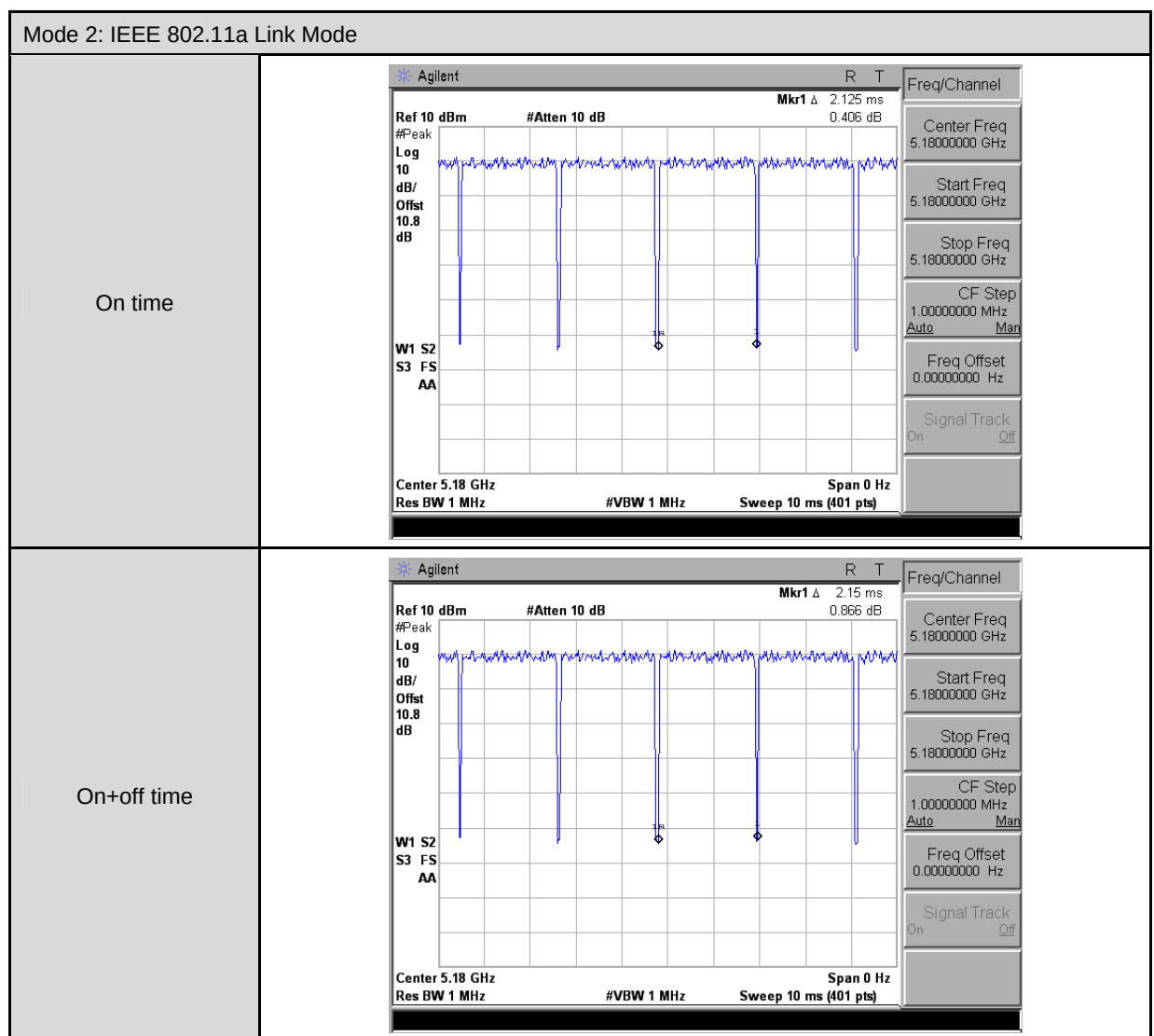
The device used two models of adapter, adapter number: MU05BT050100-A1 is worst case to perform testing.

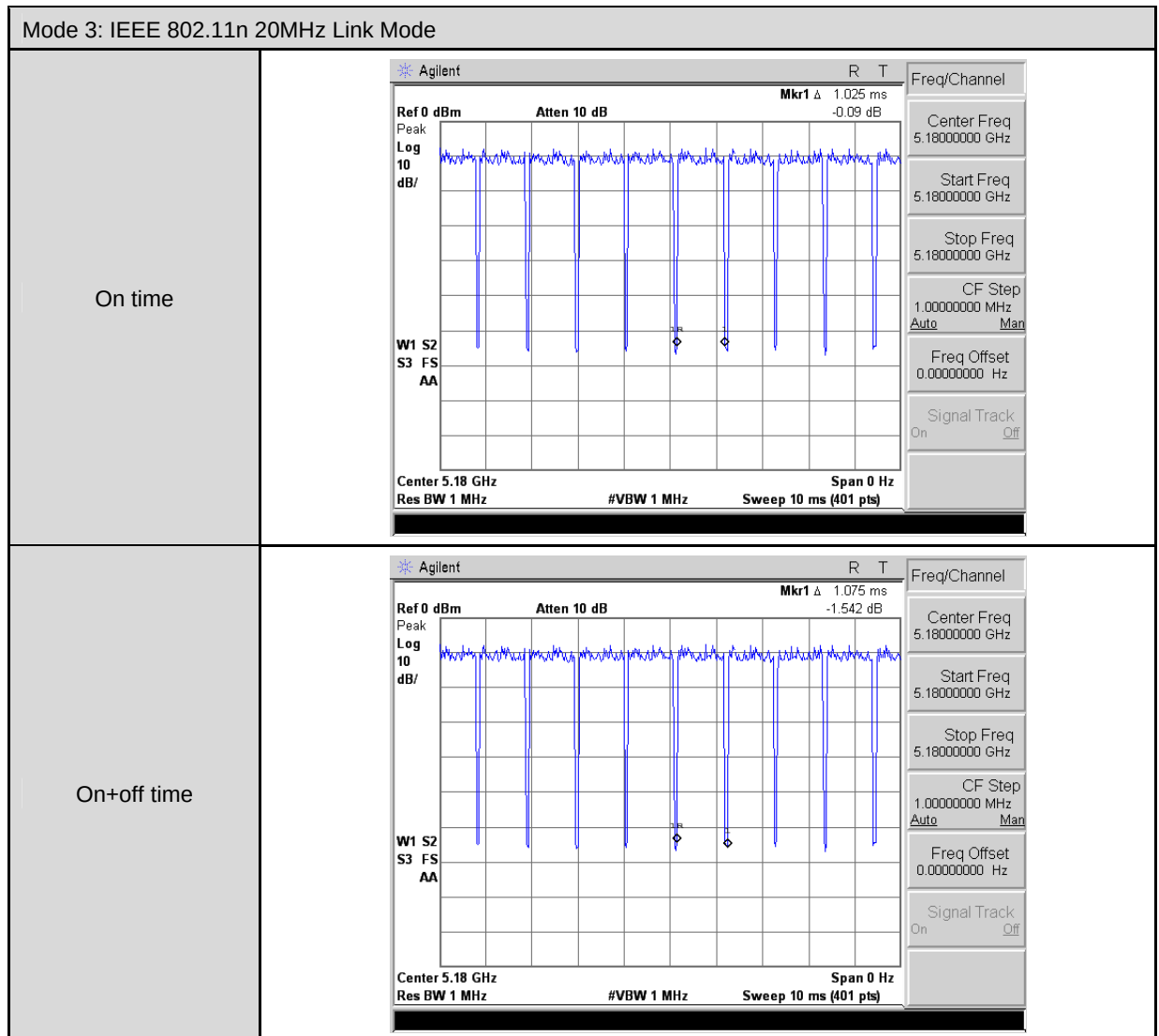
Test Mode	ANT-1	ANT-2	ANT-1+2
IEEE 802.11a Link Mode	V	V	---
IEEE 802.11n 20MHz Link Mode	V	V	V
IEEE 802.11n 40MHz Link Mode	V	V	V
IEEE 802.11ac 80MHz Link Mode	V	V	V

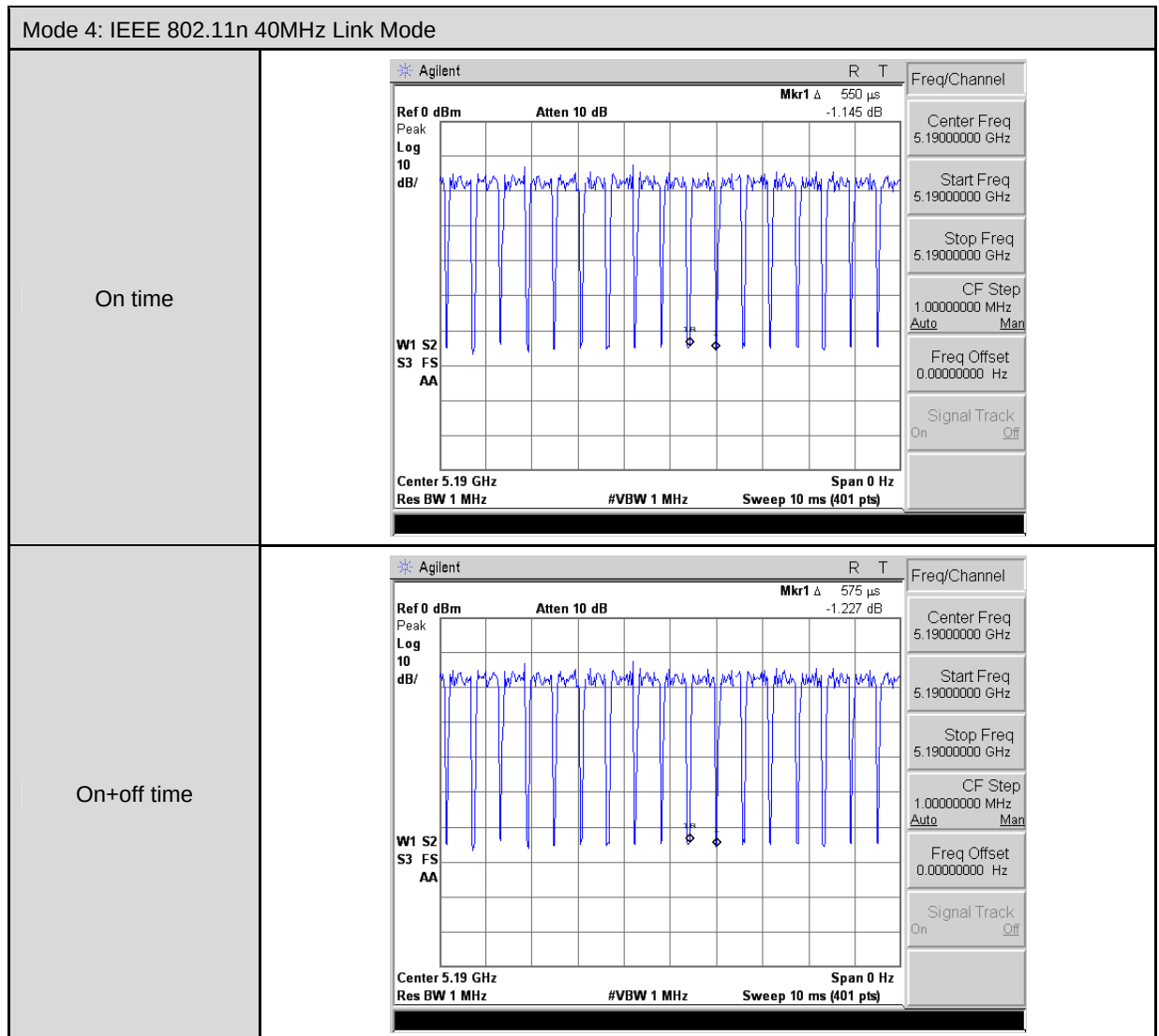
Test Mode	Band	Data Rate	Test Channel
IEEE 802.11a Link Mode	U-NII Band I	6M	36, 40, 44, 48
	U-NII Band III		149,153,157,161,165
IEEE 802.11n 20MHz Link Mode	U-NII Band I	13M	36, 40, 44
	U-NII Band III		149,153,157,161,165
IEEE 802.11n 40MHz Link Mode	U-NII Band I	27M	38, 46
	U-NII Band III		151,159
IEEE 802.11ac 80MHz Link Mode	U-NII Band I	58.6M	42
	U-NII Band III		155

Duty cycle

Test Mode	Frequency (MHz)	on time (ms)	on+off time (ms)	Duty cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
Mode 2: IEEE 802.11a Link Mode	5180.0	2.125	2.150	0.988	0.05	0.01
Mode 3: IEEE 802.11n 20MHz Link Mode	5180.0	1.025	1.075	0.953	0.21	0.98
Mode 4: IEEE 802.11n 40MHz Link Mode	5190.0	0.550	0.575	0.957	0.19	1.82
Mode 5: IEEE 802.11ac 80MHz Link Mode	5210.0	0.488	0.550	0.886	0.52	2.05









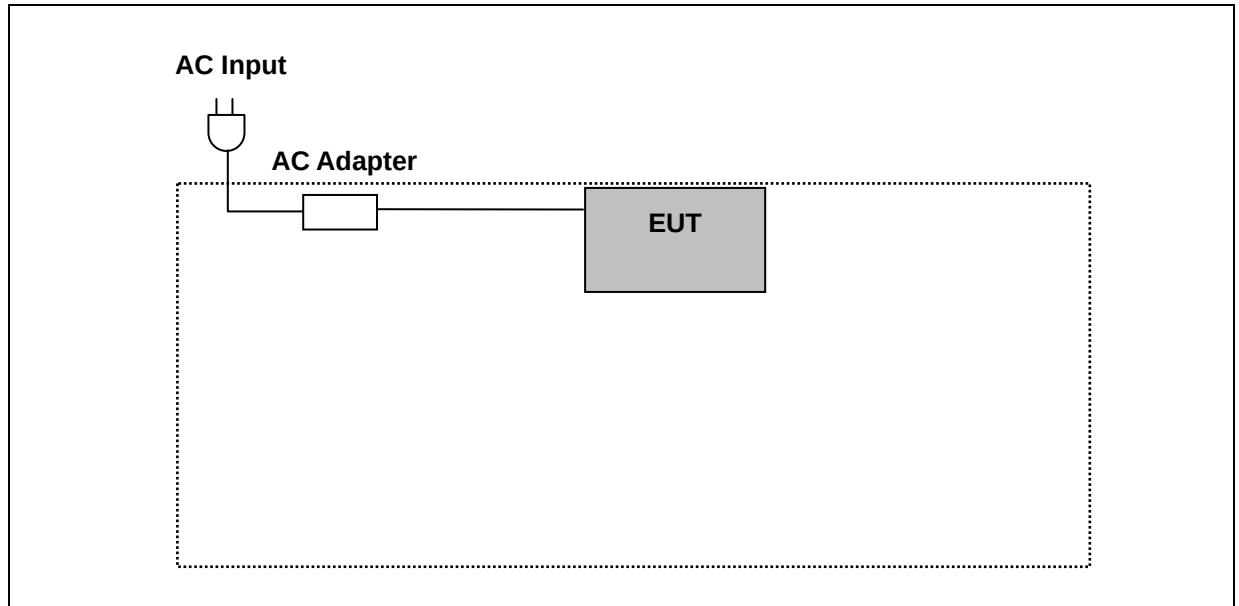
3.2. EUT Exercise Software

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

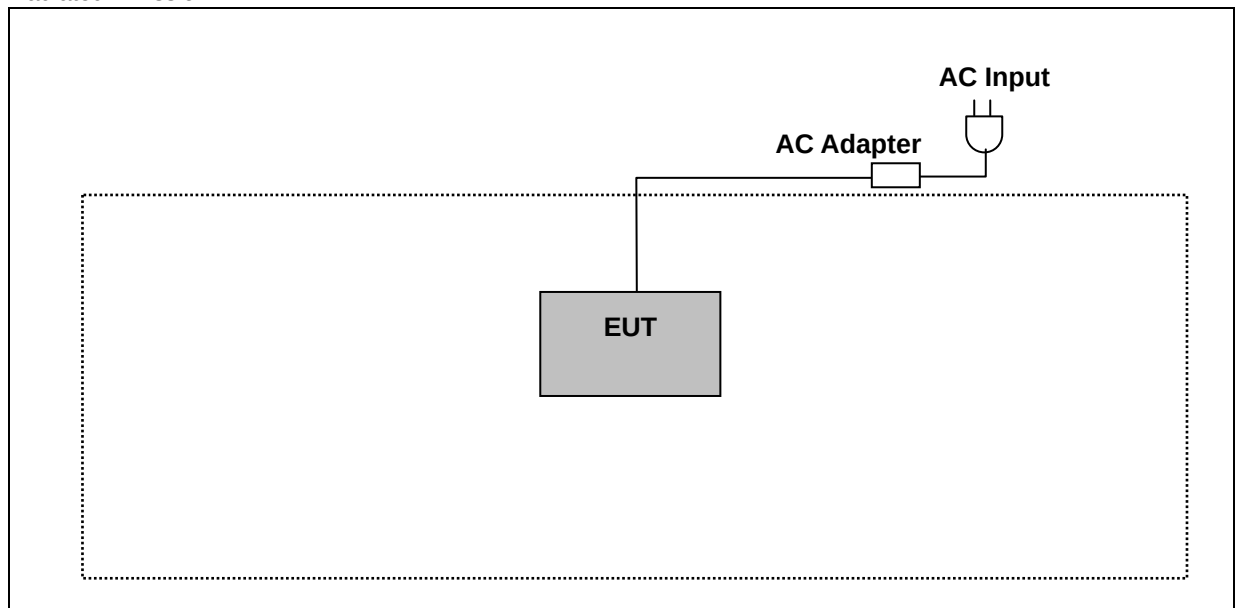
1.	Setup the EUT shown on 3.3.
2.	Turn on the power of all equipment.
3.	Turn on Wi-Fi function link to Notebook.
4.	EUT run test program.

3.3. Configuration of Test System Details

Conducted Emission



Radiated Emission



3.4. Test Site Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	26
Humidity (%RH)	25-75	60
Barometric pressure (mbar)	860-1060	950

4 AC Power Conducted Emission Measurement

4.1. Limit

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

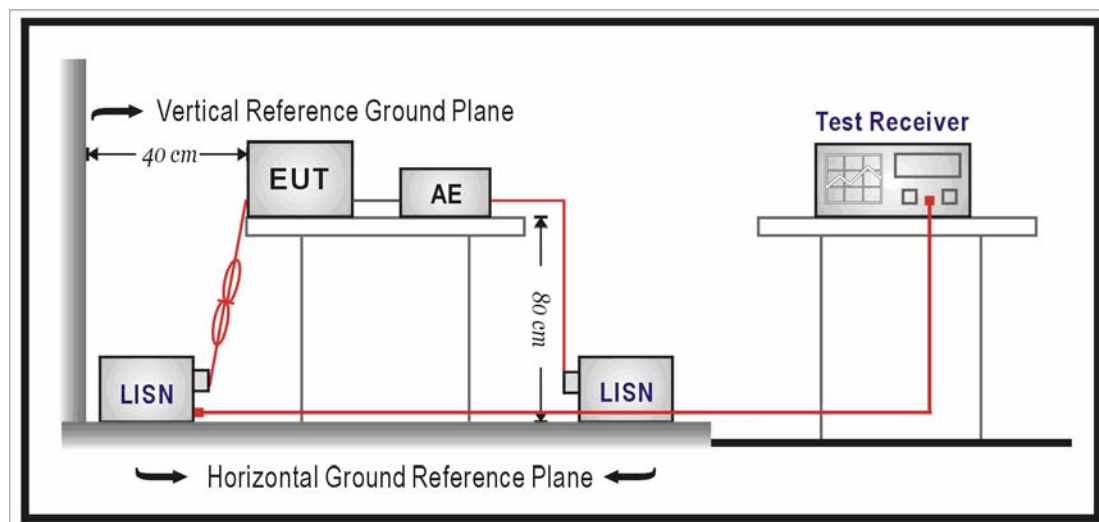
4.2. Test Instruments

Describe	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Test Receiver	R&S	ESCI	100367	06/12/2014	(1)
LISN	R&S	ENV216	101040	03/10/2015	(1)
LISN	R&S	ENV216	101041	03/06/2015	(1)
Test Site	ATL	TE05	TE05	N.C.R.	-----

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

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

4.3. Test Setup



4.4. Test Procedure

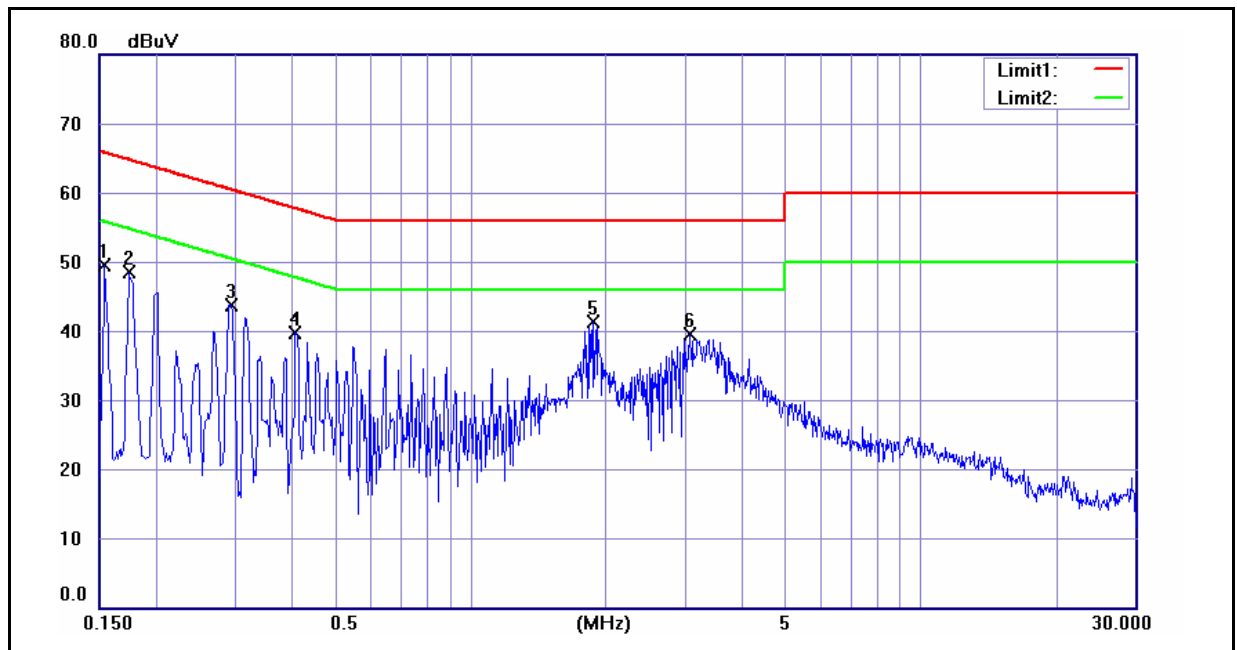
The power line conducted emission measurements were performed in a shielded enclosure. The EUT was assembled on a wooden table which is 80 centimeters high, was placed 40 centimeters from the back wall and at least 1 meter from the sidewall.

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

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

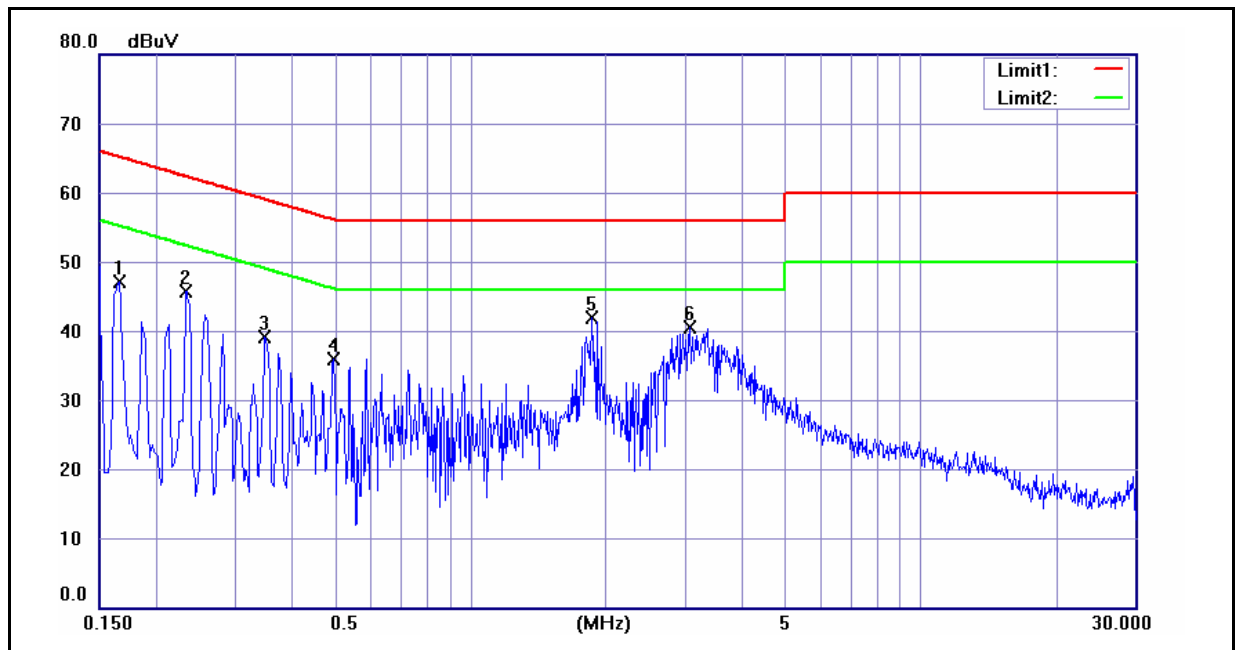
4.5. Test Result

Standard:	FCC Part 15E	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	AC791L	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 1	Date:	05/05/2015
		Test By:	Eric Ou Yang
Description: Adapter model:MU05BT050100-A1			



No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1540	39.02	23.27	9.60	48.62	32.87	65.78	55.78	-17.16	-22.91	Pass
2	0.1740	39.50	26.18	9.60	49.10	35.78	64.77	54.77	-15.67	-18.99	Pass
3	0.2940	33.21	22.58	9.61	42.82	32.19	60.41	50.41	-17.59	-18.22	Pass
4	0.4100	26.62	16.37	9.61	36.23	25.98	57.65	47.65	-21.42	-21.67	Pass
5	1.8820	35.09	22.41	9.69	44.78	32.10	56.00	46.00	-11.22	-13.90	Pass
6	3.0780	23.95	10.46	9.74	33.69	20.20	56.00	46.00	-22.31	-25.80	Pass

Standard:	FCC Part 15E	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	AC791L	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 1	Date:	05/05/2015
		Test By:	Eric Ou Yang
Description: Adapter model:MU05BT050100-A1			



No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1660	37.25	19.95	9.60	46.85	29.55	65.16	55.16	-18.31	-25.61	Pass
2	0.2340	35.03	22.64	9.60	44.63	32.24	62.31	52.31	-17.68	-20.07	Pass
3	0.3500	26.63	17.67	9.61	36.24	27.28	58.96	48.96	-22.72	-21.68	Pass
4	0.4980	23.00	12.93	9.62	32.62	22.55	56.03	46.03	-23.41	-23.48	Pass
5	1.8660	33.85	22.96	9.69	43.54	32.65	56.00	46.00	-12.46	-13.35	Pass
6	3.0900	28.30	12.44	9.76	38.06	22.20	56.00	46.00	-17.94	-23.80	Pass

5 Radiated Emission Measurement

5.1. Limit

Limits of Radiated Emission Measurement

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

Frequency Range (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	10	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

Note: 1. The lower limit shall apply at the transition frequencies.

2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

5.2. Test Instruments

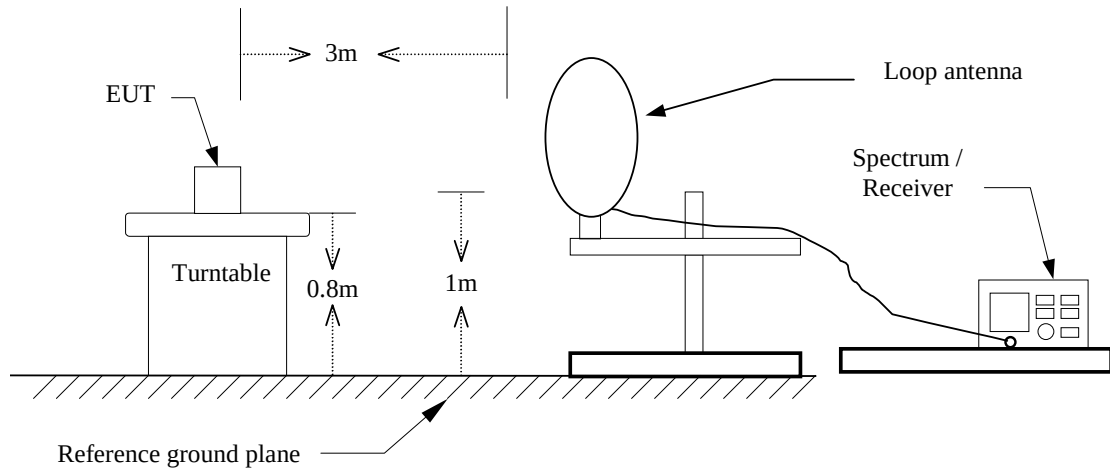
3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
RF Pre-selector	Agilent	N9039A	MY46520256	01/06/2015	(1)
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/06/2015	(1)
Pre Amplifier	Agilent	8449B	3008A02237	02/24/2015	(1)
Pre Amplifier	Agilent	8447D	2944A10961	02/24/2015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

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

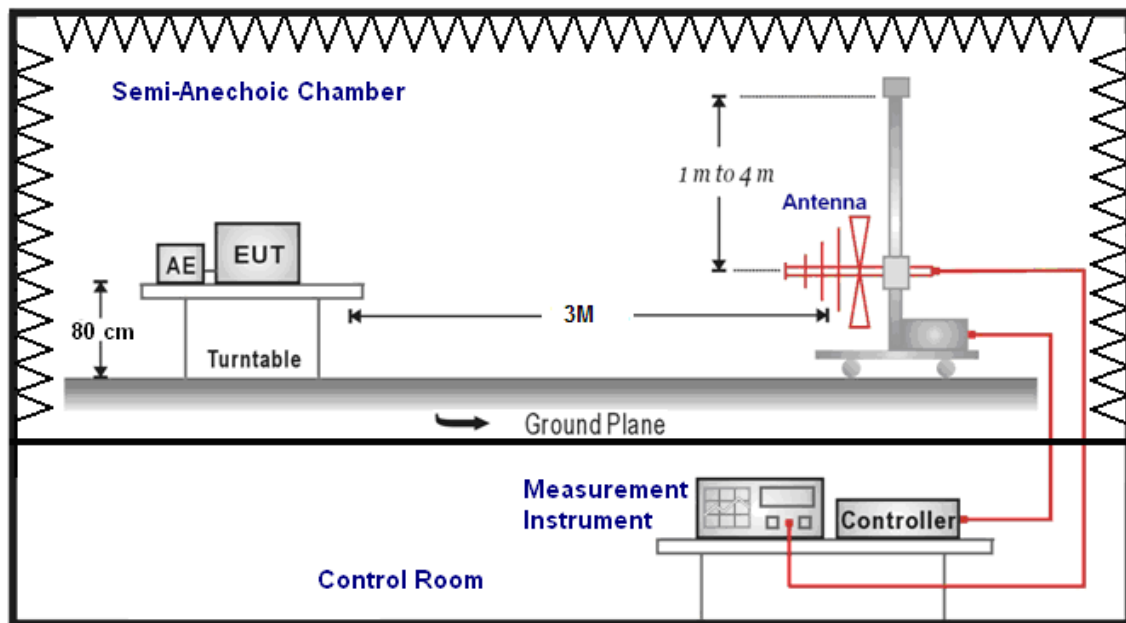
Note: N.C.R. = No Calibration Request.

5.3. Setup

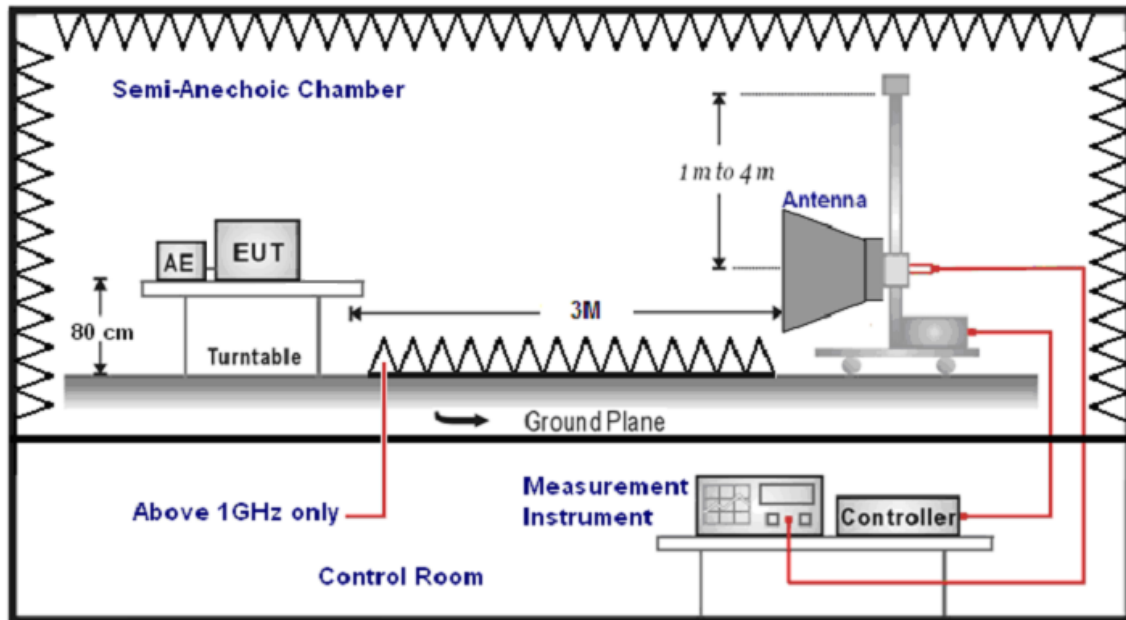
9kHz ~ 30MHz



30MHz ~ 1GHz



Above 1GHz



5.4. Test Procedure

Final radiation measurements were made on a three-meter, Semi Anechoic Chamber. The EUT system was placed on a nonconductive turntable which is 0.8 meters height, 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 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 1/T for average 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) $\text{Amplitude (dBuV/m)} = \text{FI (dBuV)} + \text{AF (dBuV)} + \text{CL (dBuV)} - \text{Gain (dB)}$

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

5.5. Test Result

Below 1GHz

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Radiated Emission		Power:		AC 120V/60Hz	
Model Number:		AC791L		Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Test Mode:		Mode 1		Date:		05/13/2015	
Description:				Test By:		Eric Ou Yang	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
190.5000	32.55	-13.23	19.32	43.50	-24.18	QP	H
303.0000	34.70	-9.36	25.34	46.00	-20.66	QP	H
451.0000	27.21	-6.28	20.93	46.00	-25.07	QP	H
586.0000	27.57	-3.53	24.04	46.00	-21.96	QP	H
691.0000	27.38	-1.66	25.72	46.00	-20.28	QP	H
820.5000	27.41	0.81	28.22	46.00	-17.78	QP	H
164.0000	30.29	-11.47	18.82	43.50	-24.68	QP	V
306.0000	26.72	-9.30	17.42	46.00	-28.58	QP	V
494.5000	34.73	-5.52	29.21	46.00	-16.79	QP	V
614.0000	28.55	-2.99	25.56	46.00	-20.44	QP	V
738.5000	28.15	-0.54	27.61	46.00	-18.39	QP	V
873.0000	27.25	1.93	29.18	46.00	-16.82	QP	V

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

Above 1GHz

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	AC791L			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 2			Date:	06/11/2015		
Frequency:	5180MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2806.000	36.55	5.61	42.16	74.00	-31.84	peak	H
4591.000	33.73	9.90	43.63	74.00	-30.37	peak	H
7629.000	33.33	13.25	46.58	74.00	-27.42	peak	H
2799.000	37.65	5.59	43.24	74.00	-30.76	peak	V
4605.000	32.65	9.92	42.57	74.00	-31.43	peak	V
7629.000	32.49	13.25	45.74	74.00	-28.26	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	AC791L			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 2			Date:	06/11/2015		
Frequency:	5200MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2813.000	36.91	5.62	42.53	74.00	-31.47	peak	H
4591.000	33.83	9.90	43.73	74.00	-30.27	peak	H
7643.000	32.96	13.27	46.23	74.00	-27.77	peak	H
2806.000	37.77	5.61	43.38	74.00	-30.62	peak	V
4591.000	33.99	9.90	43.89	74.00	-30.11	peak	V
7650.000	31.54	13.27	44.81	74.00	-29.19	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	AC791L			Temp.(℃)/Hum.(%RH):	26(℃)/60%RH		
Test Mode:	Mode 2			Date:	06/11/2015		
Frequency:	5240MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2827.000	36.84	5.66	42.50	74.00	-31.50	peak	H
4570.000	32.85	9.87	42.72	74.00	-31.28	peak	H
7643.000	32.07	13.27	45.34	74.00	-28.66	peak	H
2813.000	38.10	5.62	43.72	74.00	-30.28	peak	V
4598.000	33.44	9.91	43.35	74.00	-30.65	peak	V
7629.000	31.90	13.25	45.15	74.00	-28.85	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	AC791L			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 2			Date:	06/15/2015		
Frequency:	5745MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2834.000	36.63	5.67	42.30	74.00	-31.70	peak	H
4591.000	32.76	9.90	42.66	74.00	-31.34	peak	H
7650.000	32.29	13.27	45.56	74.00	-28.44	peak	H
2785.000	36.86	5.54	42.40	74.00	-31.60	peak	V
4577.000	33.93	9.87	43.80	74.00	-30.20	peak	V
7650.000	31.81	13.27	45.08	74.00	-28.92	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	AC791L			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 2			Date:	06/15/2015		
Frequency:	5785MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2813.000	36.91	5.62	42.53	74.00	-31.47	peak	H
4591.000	32.83	9.90	42.73	74.00	-31.27	peak	H
7657.000	31.99	13.28	45.27	74.00	-28.73	peak	H
2806.000	36.80	5.61	42.41	74.00	-31.59	peak	V
4598.000	33.40	9.91	43.31	74.00	-30.69	peak	V
7657.000	32.56	13.28	45.84	74.00	-28.16	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	AC791L			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 2			Date:	06/15/2015		
Frequency:	5825MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2827.000	36.18	5.66	41.84	74.00	-32.16	peak	H
4598.000	33.46	9.91	43.37	74.00	-30.63	peak	H
7671.000	32.64	13.30	45.94	74.00	-28.06	peak	H
2827.000	37.91	5.66	43.57	74.00	-30.43	peak	V
4682.000	33.05	10.03	43.08	74.00	-30.92	peak	V
7657.000	32.08	13.28	45.36	74.00	-28.64	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	AC791L			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 3			Date:	06/06/2015		
Frequency:	5180MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2813.000	36.59	1.07	37.66	74.00	-36.34	peak	H
4598.000	33.87	6.77	40.64	74.00	-33.36	peak	H
7678.000	33.86	14.31	48.17	74.00	-25.83	peak	H
2834.000	37.25	1.14	38.39	74.00	-35.61	peak	V
4570.000	33.64	6.68	40.32	74.00	-33.68	peak	V
7657.000	32.81	14.28	47.09	74.00	-26.91	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	AC791L			Temp.(℃)/Hum.(%RH):	26(℃)/60%RH		
Test Mode:	Mode 3			Date:	06/06/2015		
Frequency:	5200MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2813.000	37.94	1.07	39.01	74.00	-34.99	peak	H
4598.000	34.36	6.77	41.13	74.00	-32.87	peak	H
7671.000	32.89	14.30	47.19	74.00	-26.81	peak	H
2799.000	36.85	1.03	37.88	74.00	-36.12	peak	V
4626.000	32.66	6.85	39.51	74.00	-34.49	peak	V
7657.000	33.45	14.28	47.73	74.00	-26.27	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	AC791L			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 3			Date:	06/06/2015		
Frequency:	5220MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2806.000	36.28	1.05	37.33	74.00	-36.67	peak	H
4591.000	33.53	6.74	40.27	74.00	-33.73	peak	H
7671.000	33.31	14.30	47.61	74.00	-26.39	peak	H
2813.000	37.94	1.07	39.01	74.00	-34.99	peak	V
4570.000	33.72	6.68	40.40	74.00	-33.60	peak	V
7671.000	33.15	14.30	47.45	74.00	-26.55	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	AC791L			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 3			Date:	06/15/2015		
Frequency:	5745MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2799.000	36.90	5.59	42.49	74.00	-31.51	peak	H
4591.000	33.56	9.90	43.46	74.00	-30.54	peak	H
7650.000	31.66	13.27	44.93	74.00	-29.07	peak	H
2813.000	36.98	5.62	42.60	74.00	-31.40	peak	V
4577.000	33.82	9.87	43.69	74.00	-30.31	peak	V
7671.000	32.39	13.30	45.69	74.00	-28.31	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	AC791L			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 3			Date:	06/15/2015		
Frequency:	5785MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2806.000	37.58	5.61	43.19	74.00	-30.81	peak	H
4591.000	35.20	9.90	45.10	74.00	-28.90	peak	H
7629.000	31.96	13.25	45.21	74.00	-28.79	peak	H
2813.000	38.16	5.62	43.78	74.00	-30.22	peak	V
4570.000	34.31	9.87	44.18	74.00	-29.82	peak	V
7629.000	32.79	13.25	46.04	74.00	-27.96	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	AC791L			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 3			Date:	06/15/2015		
Frequency:	5825MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2806.000	37.20	5.61	42.81	74.00	-31.19	peak	H
4563.000	33.61	9.86	43.47	74.00	-30.53	peak	H
7650.000	32.03	13.27	45.30	74.00	-28.70	peak	H
2806.000	37.79	5.61	43.40	74.00	-30.60	peak	V
4598.000	33.27	9.91	43.18	74.00	-30.82	peak	V
7671.000	32.55	13.30	45.85	74.00	-28.15	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	AC791L			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 4			Date:	06/06/2015		
Frequency:	5190MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2827.000	37.19	1.12	38.31	74.00	-35.69	peak	H
4563.000	33.68	6.66	40.34	74.00	-33.66	peak	H
7671.000	33.18	14.30	47.48	74.00	-26.52	peak	H
2806.000	37.13	1.05	38.18	74.00	-35.82	peak	V
4591.000	34.29	6.74	41.03	74.00	-32.97	peak	V
7671.000	32.48	14.30	46.78	74.00	-27.22	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	AC791L			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 4			Date:	06/06/2015		
Frequency:	5230MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2806.000	37.20	1.05	38.25	74.00	-35.75	peak	H
4577.000	33.89	6.69	40.58	74.00	-33.42	peak	H
7699.000	33.16	14.35	47.51	74.00	-26.49	peak	H
2813.000	36.18	1.07	37.25	74.00	-36.75	peak	V
4598.000	34.52	6.77	41.29	74.00	-32.71	peak	V
7657.000	33.29	14.28	47.57	74.00	-26.43	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	AC791L			Temp.(℃)/Hum.(%RH):	26(℃)/60%RH		
Test Mode:	Mode 4			Date:	06/15/2015		
Frequency:	5755MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2827.000	36.98	5.66	42.64	74.00	-31.36	peak	H
4549.000	34.05	9.83	43.88	74.00	-30.12	peak	H
7643.000	32.10	13.27	45.37	74.00	-28.63	peak	H
2806.000	37.40	5.61	43.01	74.00	-30.99	peak	V
4605.000	32.60	9.92	42.52	74.00	-31.48	peak	V
7643.000	32.49	13.27	45.76	74.00	-28.24	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	AC791L			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 4			Date:	06/15/2015		
Frequency:	5795MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2813.000	38.26	5.62	43.88	74.00	-30.12	peak	H
4577.000	35.05	9.87	44.92	74.00	-29.08	peak	H
7685.000	32.68	13.30	45.98	74.00	-28.02	peak	H
2806.000	38.98	5.61	44.59	74.00	-29.41	peak	V
4570.000	34.49	9.87	44.36	74.00	-29.64	peak	V
7685.000	33.26	13.30	46.56	74.00	-27.44	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	AC791L			Temp.(℃)/Hum.(%RH):	26(℃)/60%RH		
Test Mode:	Mode 5			Date:	05/09/2015		
Frequency:	5210MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2813.000	37.44	1.07	38.51	74.00	-35.49	peak	H
4591.000	33.43	6.74	40.17	74.00	-33.83	peak	H
7678.000	32.07	14.31	46.38	74.00	-27.62	peak	H
2834.000	35.89	1.14	37.03	74.00	-36.97	peak	V
4591.000	35.01	6.74	41.75	74.00	-32.25	peak	V
7657.000	32.16	14.28	46.44	74.00	-27.56	peak	V

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	AC791L			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 5			Date:	06/15/2015		
Frequency:	5775MHz			Test By:	Eric Ou Yang		
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2785.000	35.27	5.54	40.81	74.00	-33.19	peak	H
4577.000	32.58	9.87	42.45	74.00	-31.55	peak	H
7657.000	31.63	13.28	44.91	74.00	-29.09	peak	H
2827.000	36.08	5.66	41.74	74.00	-32.26	peak	V
4570.000	31.71	9.87	41.58	74.00	-32.42	peak	V
7657.000	32.86	13.28	46.14	74.00	-27.86	peak	V

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Radiated Emission		Power:		AC 120V/60Hz	
Model Number:		AC791L		Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Mode:		2.4GHz+5GHz		Date:		06/24/2015	
		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
2806.000	36.39	5.61	42.00	74.00	-32.00	peak	H
4577.000	32.85	9.87	42.72	74.00	-31.28	peak	H
7671.000	33.67	13.30	46.97	74.00	-27.03	peak	H
2813.000	34.10	5.62	39.72	74.00	-34.28	peak	V
4318.000	31.97	9.40	41.37	74.00	-32.63	peak	V
7650.000	31.80	13.27	45.07	74.00	-28.93	peak	V

Band Edge

Standard:		FCC Part 15E			Test Distance:		3m	
Test item:		Radiated Emission			Power:		AC 120V/60Hz	
Model Number:		AC791L			Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Test Mode:		Mode 2			Date:		06/11/2015	
Frequency:		5180 MHz			Test By:		Eric Ou Yang	
Frequency	Reading	Correct Factor	Result	Limit	Margin	Remark	Ant.Polar.	
(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		H / V	
5147.500	45.85	10.74	56.59	74.00	-17.41	peak	H	
5147.500	36.02	10.74	46.76	54.00	-7.24	AVG	H	
5150.000	47.21	10.74	57.95	74.00	-16.05	peak	H	
5150.000	36.43	10.74	47.17	54.00	-6.83	AVG	H	
4999.800	47.07	10.52	57.59	74.00	-16.41	peak	V	
4999.800	35.85	10.52	46.37	54.00	-7.63	AVG	V	
5150.000	43.46	10.74	54.20	74.00	-19.80	peak	V	
5150.000	35.81	10.74	46.55	54.00	-7.45	AVG	V	

Standard: FCC Part 15E		Test Distance: 3m					
Test item: Radiated Emission		Power: AC 120V/60Hz					
Model Number: AC791L		Temp.(°C)/Hum.(%RH): 26(°C)/60%RH					
Test Mode: Mode 2		Date: 06/11/2015					
Frequency: 5240 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	41.14	11.05	52.19	74.00	-21.81	peak	H
5350.000	34.92	11.05	45.97	54.00	-8.03	AVG	H
5430.520	44.01	11.16	55.17	74.00	-18.83	peak	H
5430.520	35.10	11.16	46.26	54.00	-7.74	AVG	H
5350.000	41.15	11.05	52.20	74.00	-21.80	peak	V
5350.000	35.30	11.05	46.35	54.00	-7.65	AVG	V
5366.500	44.21	11.07	55.28	74.00	-18.72	peak	V
5366.500	35.34	11.07	46.41	54.00	-7.59	AVG	V

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Radiated Emission		Power:		AC 120V/60Hz	
Model Number:		AC791L		Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Test Mode:		Mode 3		Date:		06/11/2015	
Frequency:		5180 MHz		Test By:		Eric Ou Yang	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
5144.000	49.54	8.21	57.75	74.00	-16.25	peak	H
5144.000	38.20	8.21	46.41	54.00	-7.59	AVG	H
5150.000	50.26	8.21	58.47	74.00	-15.53	peak	H
5150.000	38.82	8.21	47.03	54.00	-6.97	AVG	H
4999.800	46.17	8.02	54.19	74.00	-19.81	peak	V
4999.800	37.32	8.02	45.34	54.00	-8.66	AVG	V
5150.000	44.76	8.21	52.97	74.00	-21.03	peak	V
5150.000	37.91	8.21	46.12	54.00	-7.88	AVG	V

Standard:		FCC Part 15E			Test Distance:		3m	
Test item:		Radiated Emission			Power:		AC 120V/60Hz	
Model Number:		AC791L			Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Test Mode:		Mode 3			Date:		06/11/2015	
Frequency:		5220 MHz			Test By:		Eric Ou Yang	
Frequency	Reading	Correct Factor	Result	Limit	Margin	Remark	Ant.Polar.	
(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		H / V	
5350.000	43.18	8.48	51.66	74.00	-22.34	peak	H	
5396.400	44.50	8.53	53.03	74.00	-20.97	peak	H	
5396.400	35.64	8.53	44.17	54.00	-9.83	AVG	H	
5350.000	42.66	8.48	51.14	74.00	-22.86	peak	V	
5358.240	44.78	8.48	53.26	74.00	-20.74	peak	V	
5358.240	35.78	8.48	44.26	54.00	-9.74	AVG	V	

Standard:		FCC Part 15E			Test Distance:		3m	
Test item:		Radiated Emission			Power:		AC 120V/60Hz	
Model Number:		AC791L			Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Test Mode:		Mode 4			Date:		06/11/2015	
Frequency:		5190 MHz			Test By:		Eric Ou Yang	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V	
5141.900	51.29	8.21	59.50	74.00	-14.50	peak	H	
5141.900	37.87	8.21	46.08	54.00	-7.92	AVG	H	
5150.000	49.99	8.21	58.20	74.00	-15.80	peak	H	
5150.000	38.52	8.21	46.73	54.00	-7.27	AVG	H	
5147.500	49.36	8.21	57.57	74.00	-16.43	peak	V	
5147.500	38.07	8.21	46.28	54.00	-7.72	AVG	V	
5150.000	48.52	8.21	56.73	74.00	-17.27	peak	V	
5150.000	39.12	8.21	47.33	54.00	-6.67	AVG	V	

Standard:		FCC Part 15E			Test Distance:		3m	
Test item:		Radiated Emission			Power:		AC 120V/60Hz	
Model Number:		AC791L			Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Test Mode:		Mode 4			Date:		06/11/2015	
Frequency:		5230 MHz			Test By:		Eric Ou Yang	
Frequency	Reading	Correct Factor	Result	Limit	Margin	Remark	Ant.Polar.	
(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		H / V	
5350.000	40.81	8.48	49.29	74.00	-24.71	peak	H	
5373.980	44.16	8.50	52.66	74.00	-21.34	peak	H	
5373.980	35.28	8.50	43.78	54.00	-10.22	AVG	H	
5350.000	42.37	8.48	50.85	74.00	-23.15	peak	V	
5416.300	44.85	8.56	53.41	74.00	-20.59	peak	V	
5416.300	35.40	8.56	43.96	54.00	-10.04	AVG	V	

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Radiated Emission		Power:		AC 120V/60Hz	
Model Number:		AC791L		Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Test Mode:		Mode 5		Date:		05/09/2015	
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
4940.200	46.33	7.83	54.16	74.00	-19.84	peak	H
4940.200	35.81	7.83	43.64	54.00	-10.36	AVG	H
5150.000	46.15	8.21	54.36	74.00	-19.64	peak	H
5150.000	35.56	8.21	43.77	54.00	-10.23	AVG	H
5350.000	42.48	8.48	50.96	74.00	-23.04	peak	H
5405.140	44.58	8.54	53.12	74.00	-20.88	peak	H
5405.140	35.37	8.54	43.91	54.00	-10.09	AVG	H
5146.810	45.70	8.21	53.91	74.00	-20.09	peak	V
5146.810	35.58	8.21	43.79	54.00	-10.21	AVG	V
5150.000	44.79	8.21	53.00	74.00	-21.00	peak	V
5150.000	35.96	8.21	44.17	54.00	-9.83	AVG	V
5350.000	42.05	8.48	50.53	74.00	-23.47	peak	V
5355.220	46.93	8.48	55.41	74.00	-18.59	peak	V
5355.220	35.54	8.48	44.02	54.00	-9.98	AVG	V

6 Maximum Conducted Output Power Measurement

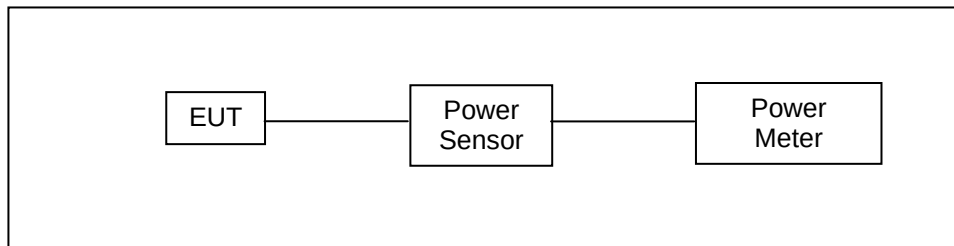
6.1. Limit

Conducted Output Power

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

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

6.2. Test Setup



6.3. Test Instruments

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

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

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

6.4. Test Procedure

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

6.5. Test Result

Band	Data Rate	CH	Frequency (MHz)	RF power setting in Test Software		Test Software Version
				Antenna 1	Antenna 2	
IEEE 802.11a	6M	36	5180	8	8	QRCT Version3.0.28.0
		40	5200	8	8	
		44	5220	8	8	
		48	5240	8	8	
		149	5745	8	8	
		153	5765	8	8	
		157	5785	8	8	
		161	5805	8	8	
		165	5825	8	8	
IEEE 802.11n 20MHz	13M	36	5180	8	8	
		40	5200	8	8	
		44	5220	8	8	
		149	5745	8	8	
		153	5765	8	8	
		157	5785	8	8	
		161	5805	8	8	
IEEE 802.11n 40MHz	27M	165	5825	8	8	
		38	5190	8	8	
		46	5230	8	8	
		151	5755	8	8	
IEEE 802.11ac 80MHz	58.6M	159	5795	8	8	
		42	5210	8	8	
		155	5775	8	8	

Model Number		AC791L							
Test Item		Maximum Conducted Output Power							
Test Mode		Mode 2: IEEE 802.11a Link Mode							
Date of Test		06/11/2015, 06/15/2015				Test Site		TE02	
Frequency (MHz)	Data Rate	Antenna 1		Antenna 2		Antenna 1+2		FCC Limit (dBm)	
		Average Power		Average Power		Average Power			
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)		
5180	6M	8.25	0.007	7.96	0.006	---	---	< 24	
5200		7.93	0.006	7.69	0.006	---	---		
5220		7.62	0.006	7.37	0.005	---	---		
5240		7.81	0.006	7.51	0.006	---	---		
5745		6.48	0.004	6.19	0.004	---	---	< 30	
5765		6.59	0.005	6.35	0.004	---	---		
5785		6.44	0.004	6.18	0.004	---	---		
5805		6.40	0.004	6.10	0.004	---	---		
5825	54M	6.29	0.004	6.04	0.004	---	---	< 24	
5180		7.51	0.006	7.22	0.005	---	---		
5200		7.21	0.005	6.99	0.005	---	---		
5220		6.87	0.005	6.63	0.005	---	---		
5240		7.07	0.005	6.77	0.005	---	---	< 30	
5745		5.73	0.004	5.44	0.003	---	---		
5765		5.81	0.004	5.59	0.004	---	---		
5785		5.71	0.004	5.47	0.004	---	---		
5805		5.61	0.004	5.31	0.003	---	---		
5825		5.53	0.004	5.23	0.003	---	---		

Model Number		AC791L							
Test Item		Maximum Conducted Output Power							
Test Mode		Mode 3: IEEE 802.11n 20MHz Link Mode							
Date of Test		06/06/2015, 06/15/2015				Test Site		TE02	
Frequency (MHz)	Data Rate	Antenna 1		Antenna 2		Antenna 1+2		FCC Limit (dBm)	
		Average Power		Average Power		Average Power			
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)		
5180	13M	8.20	0.007	7.83	0.006	11.03	0.013	< 24	
5200		8.23	0.007	7.89	0.006	11.07	0.013		
5220		7.67	0.006	7.24	0.005	10.47	0.011		
5745		6.06	0.004	6.12	0.004	9.10	0.008	< 30	
5765		6.03	0.004	6.01	0.004	9.03	0.008		
5785		6.30	0.004	6.22	0.004	9.27	0.008		
5805		6.32	0.004	6.20	0.004	9.27	0.008		
5825		6.11	0.004	6.04	0.004	9.09	0.008		
5180	130M	8.12	0.006	7.79	0.006	10.97	0.012	< 24	
5200		8.17	0.007	7.85	0.006	11.02	0.013		
5220		7.60	0.006	7.22	0.005	10.42	0.011		
5745		5.92	0.004	5.68	0.004	8.81	0.008	< 30	
5765		5.87	0.004	5.57	0.004	8.73	0.007		
5785		6.09	0.004	5.79	0.004	8.95	0.008		
5805		6.17	0.004	5.88	0.004	9.04	0.008		
5825		5.53	0.004	5.21	0.003	8.38	0.007		

Model Number		AC791L							
Test Item		Maximum Conducted Output Power							
Test Mode		Mode 4: IEEE 802.11n 40MHz Link Mode							
Date of Test		06/06/2015, 06/15/2015				Test Site		TE02	
Frequency (MHz)	Data Rate	Antenna 1		Antenna 2		Antenna 1+2		FCC Limit (dBm)	
		Average Power		Average Power		Average Power			
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)		
5190	27M	7.92	0.006	7.49	0.006	10.72	0.012	< 24	
5230		7.50	0.006	7.20	0.005	10.36	0.011		
5755		6.34	0.004	6.04	0.004	9.20	0.008	< 30	
5795		6.50	0.004	6.25	0.004	9.39	0.009		
5190	270M	7.83	0.006	7.41	0.006	10.64	0.012	< 24	
5230		7.39	0.005	7.09	0.005	10.25	0.011	< 30	
5755		6.26	0.004	5.97	0.004	9.13	0.008		

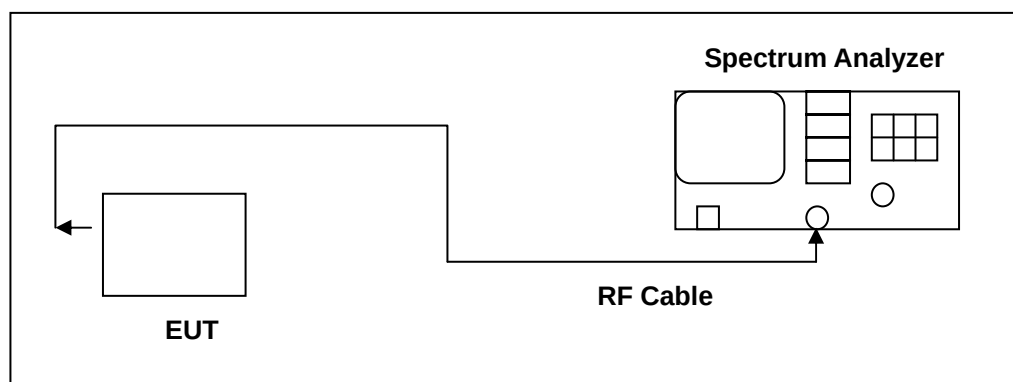
Model Number		AC791L							
Test Item		Maximum Conducted Output Power							
Test Mode		Mode 5: IEEE 802.11ac 80MHz Link Mode							
Date of Test		05/05/2015, 06/15/2015				Test Site		TE02	
Frequency (MHz)	Data Rate	Antenna 1		Antenna 2		Antenna 1+2		FCC Limit (dBm)	
		Average Power		Average Power		Average Power			
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)		
5210	58.6M	8.25	0.007	7.93	0.006	11.10	0.013	< 24	
5775		6.17	0.004	6.02	0.004	9.11	0.008	< 30	
5210	780M	7.42	0.006	7.06	0.005	10.25	0.011	< 24	
5775		6.10	0.004	5.72	0.004	8.92	0.008	< 30	

7 26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement

7.1. Limit

N/A

7.2. Test Setup



7.3. Test Instruments

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

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

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

7.4. Test Procedure

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

7.5. Test Result

Model Number	AC791L		
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement		
Test Mode	Mode 2: IEEE 802.11a Link Mode		
Date of Test	06/10/2015	Test Site	TE02
Frequency (MHz)	Antenna 1		
	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	
5180	20.863	16.9682	
5200	21.149	16.9801	
5240	21.674	16.8521	

Model Number	AC791L			
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement			
Test Mode	Mode 3: IEEE 802.11n 20MHz Link Mode			
Date of Test	06/09/2015	Test Site	TE02	
Frequency (MHz)	Antenna 1		Antenna 2	
	26dB Bandwidth (MHz)	99 % Occupied Bandwidth	26dB Bandwidth (MHz)	99 % Occupied Bandwidth
5180	24.247	19.2367	25.260	19.5256
5200	24.598	19.2059	24.996	19.4474
5220	24.169	19.1562	25.051	19.4185

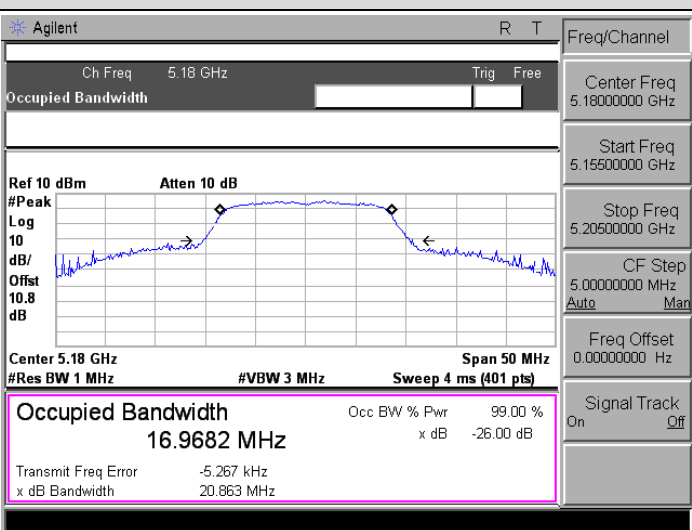
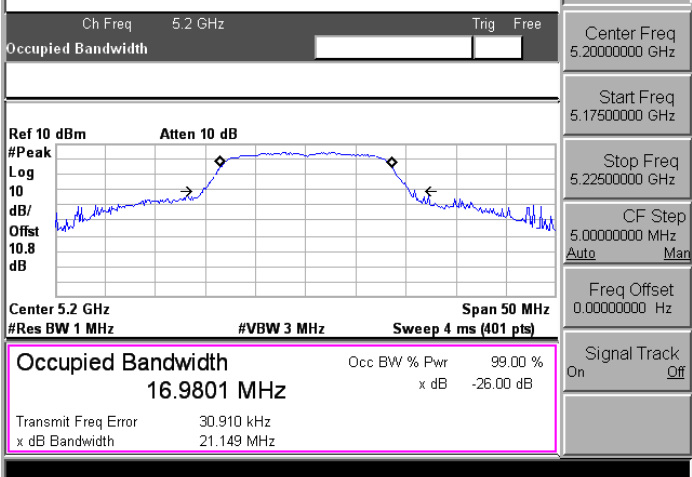
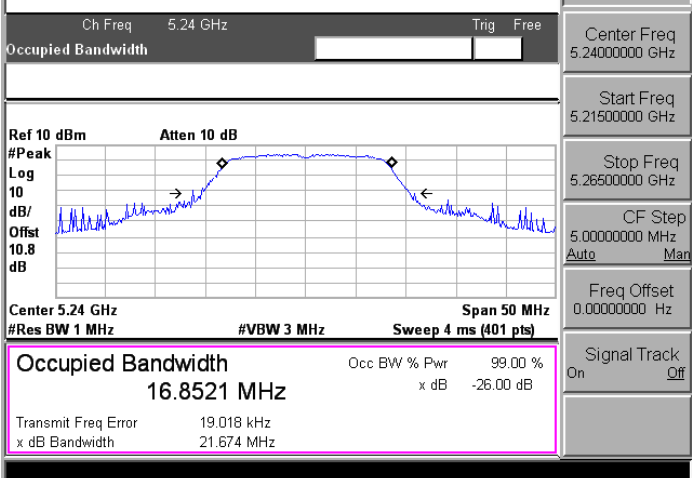
Model Number	AC791L			
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement			
Test Mode	Mode 4: IEEE 802.11n 40MHz Link Mode			
Date of Test	06/09/2015	Test Site	TE02	
Frequency (MHz)	Antenna 1		Antenna 2	
	26dB Bandwidth (MHz)	99 % Occupied Bandwidth	26dB Bandwidth (MHz)	99 % Occupied Bandwidth
5190	46.895	37.1754	46.946	37.3167
5230	46.914	37.1917	47.403	37.3665

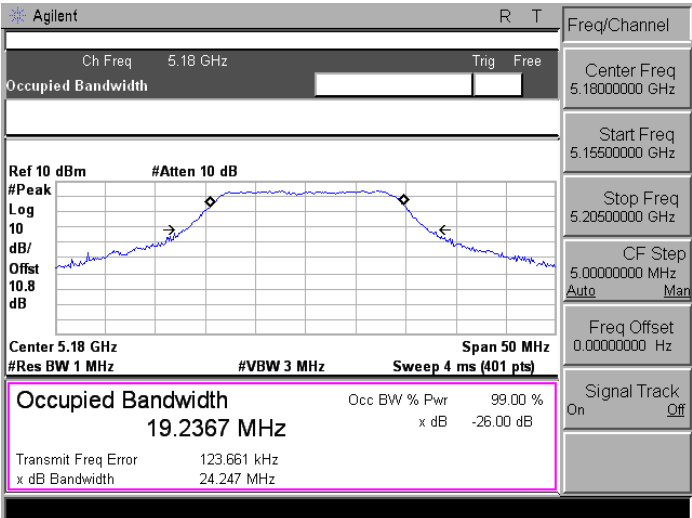
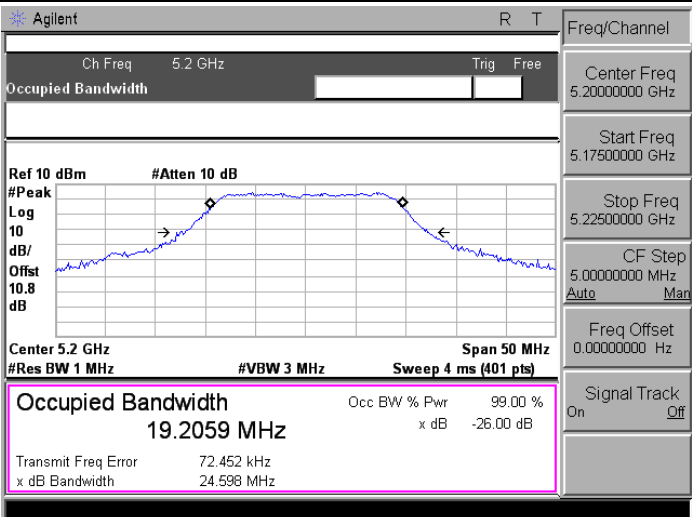
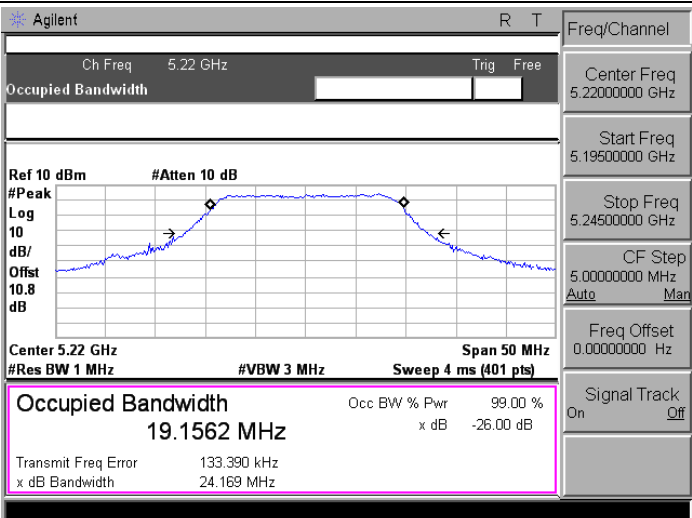
Note: The 99% occupied bandwidth not crossed 5250MHz.

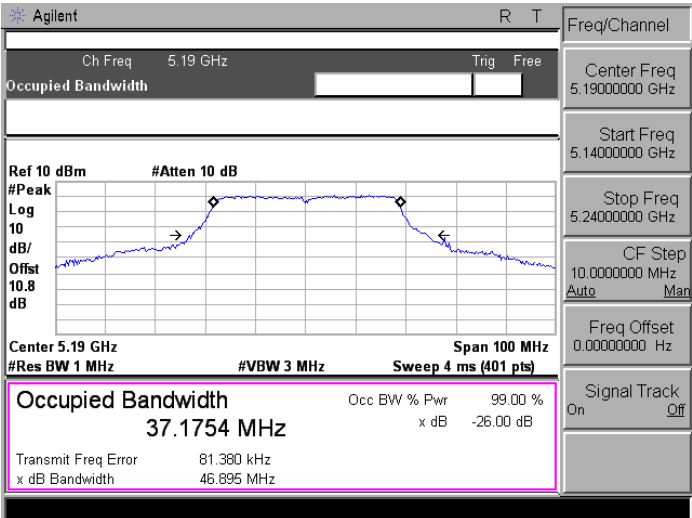
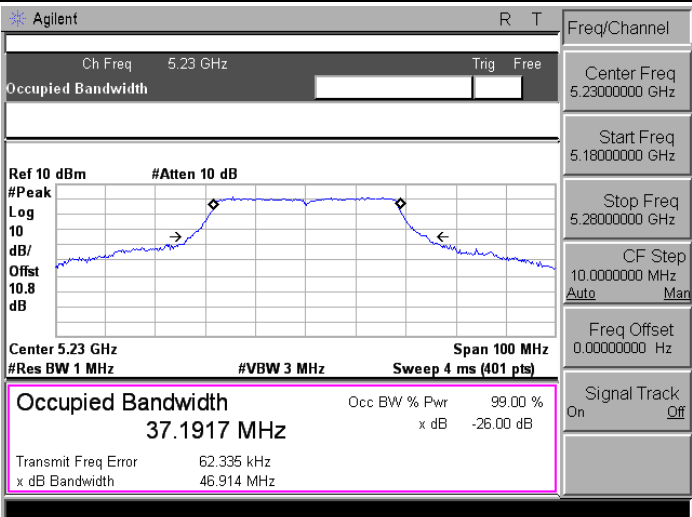
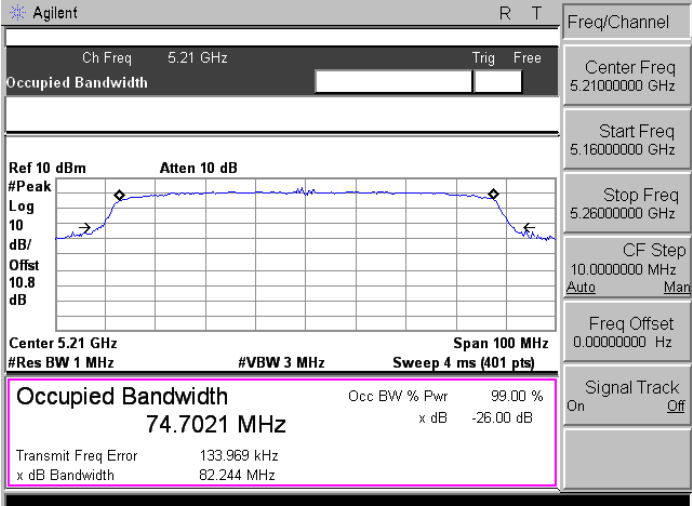
Model Number	AC791L			
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement			
Test Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode			
Date of Test	05/06/2015	Test Site	TE02	
Frequency (MHz)	Antenna 1		Antenna 2	
	26dB Bandwidth (MHz)	99 % Occupied Bandwidth	26dB Bandwidth (MHz)	99 % Occupied Bandwidth
5210	82.244	74.7021	83.462	74.8040

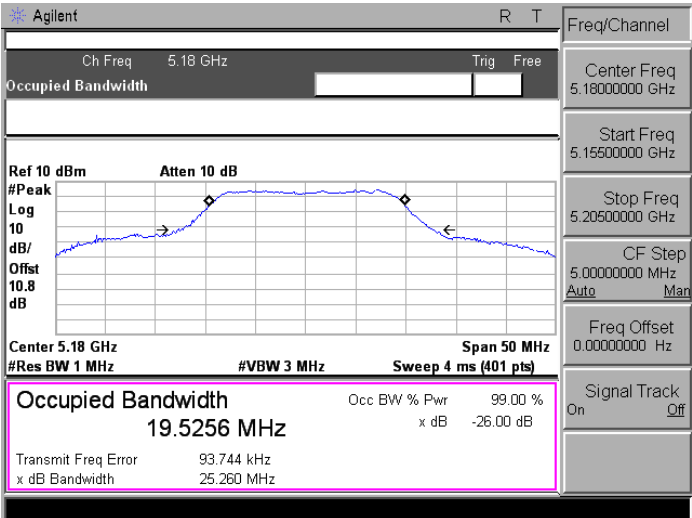
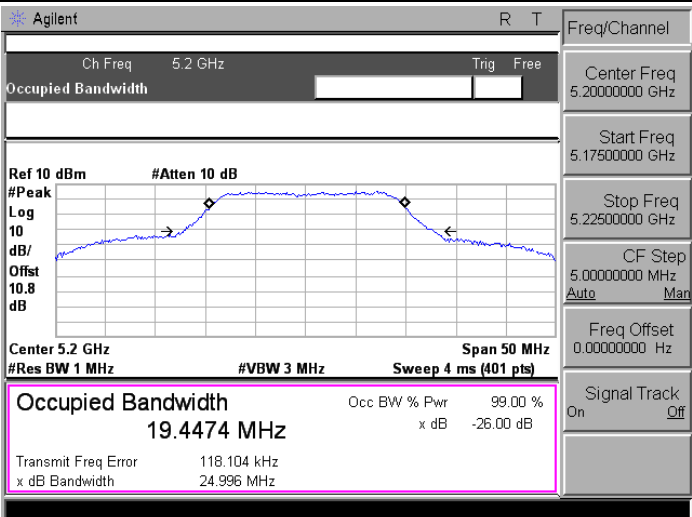
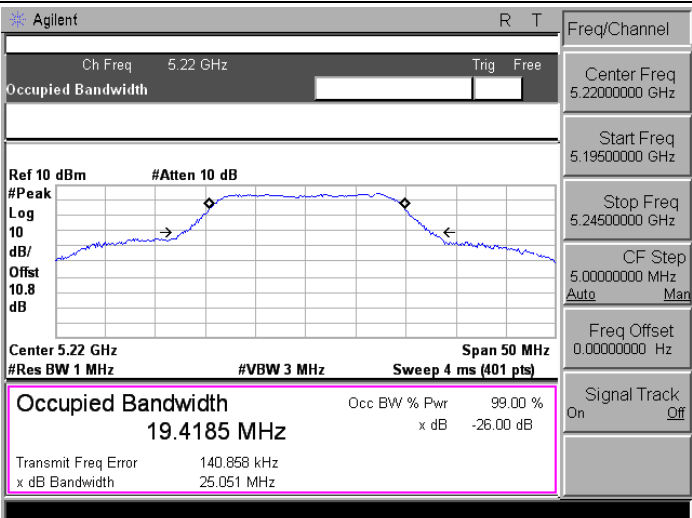
Note: The 99% occupied bandwidth not crossed 5250MHz.

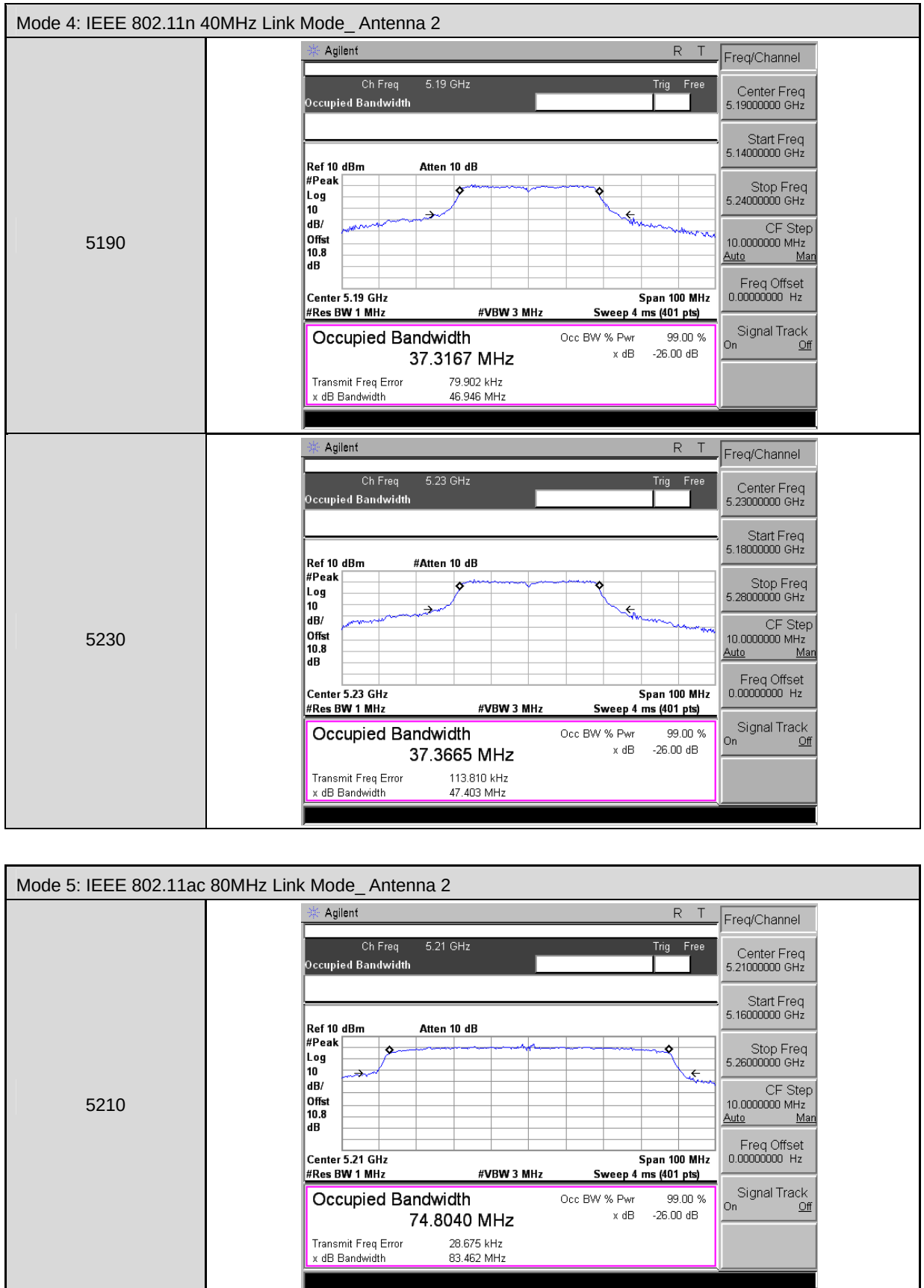
7.6. Test Graphs

5180	Mode 2: IEEE 802.11a Link Mode_ Antenna 1 
5200	
5240	

Mode 3: IEEE 802.11n 20MHz Link Mode_ Antenna 1		
5180		Agilent R T Ch Freq 5.18 GHz Trig Free Occupied Bandwidth Ref 10 dBm #Peak Log 10 dB/Offst 10.8 dB #Atten 10 dB Center 5.18 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 19.2367 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 123.661 kHz x dB Bandwidth 24.247 MHz Freq/Channel Center Freq 5.18000000 GHz Start Freq 5.15000000 GHz Stop Freq 5.20500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5200		Agilent R T Ch Freq 5.2 GHz Trig Free Occupied Bandwidth Ref 10 dBm #Peak Log 10 dB/Offst 10.8 dB #Atten 10 dB Center 5.2 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 19.2059 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 72.452 kHz x dB Bandwidth 24.598 MHz Freq/Channel Center Freq 5.20000000 GHz Start Freq 5.17500000 GHz Stop Freq 5.22500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5220		Agilent R T Ch Freq 5.22 GHz Trig Free Occupied Bandwidth Ref 10 dBm #Peak Log 10 dB/Offst 10.8 dB #Atten 10 dB Center 5.22 GHz Span 50 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 19.1562 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 133.390 kHz x dB Bandwidth 24.169 MHz Freq/Channel Center Freq 5.22000000 GHz Start Freq 5.19500000 GHz Stop Freq 5.24500000 GHz CF Step 5.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 4: IEEE 802.11n 40MHz Link Mode_ Antenna 1		
5190		Freq/Channel Center Freq 5.19000000 GHz Start Freq 5.14000000 GHz Stop Freq 5.24000000 GHz CF Step 10.0000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5230		Freq/Channel Center Freq 5.23000000 GHz Start Freq 5.18000000 GHz Stop Freq 5.28000000 GHz CF Step 10.0000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
Mode 5: IEEE 802.11ac 80MHz Link Mode_ Antenna 1		
5210		Freq/Channel Center Freq 5.21000000 GHz Start Freq 5.16000000 GHz Stop Freq 5.26000000 GHz CF Step 10.0000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 3: IEEE 802.11n 20MHz Link Mode_ Antenna 2	
5180	
5200	
5220	



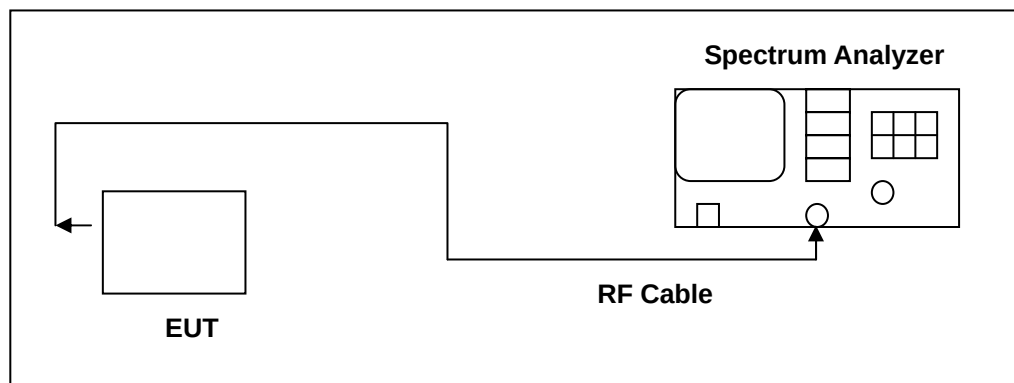
8 20dB RF Bandwidth Measurement

8.1. Limit

N/A

If the device grant is changed to show operation in the 5.15-5.25 GHz band please ensure that the test data show that the 20dB BW remains in the band.

8.2. Test Setup



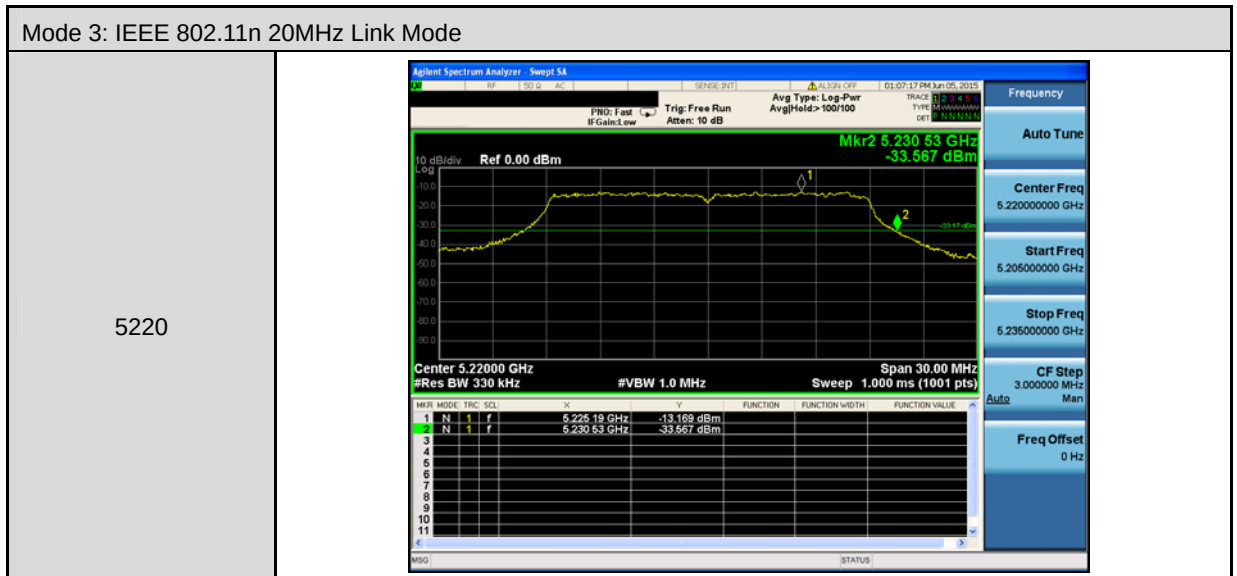
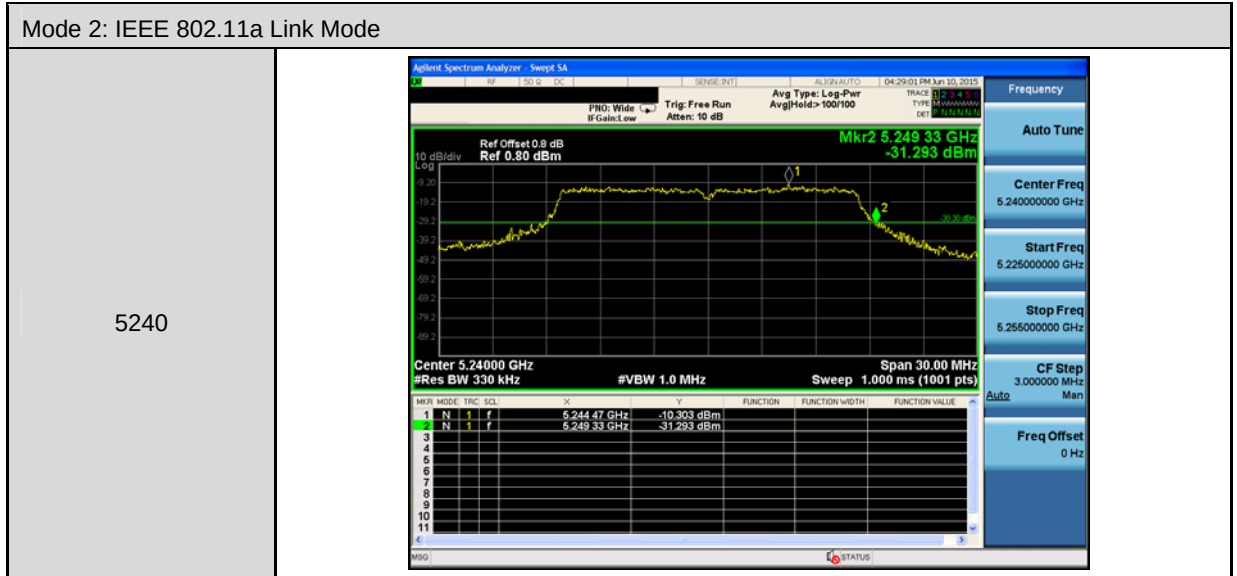
8.3. Test Instruments

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

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

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

8.4. Test Graphs



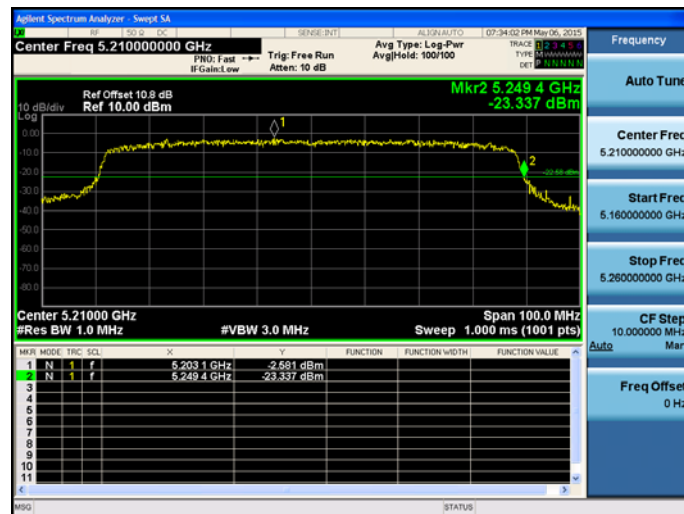
Mode 4: IEEE 802.11n 40MHz Link Mode

5230



Mode 5: IEEE 802.11ac 80MHz Link Mode

5210



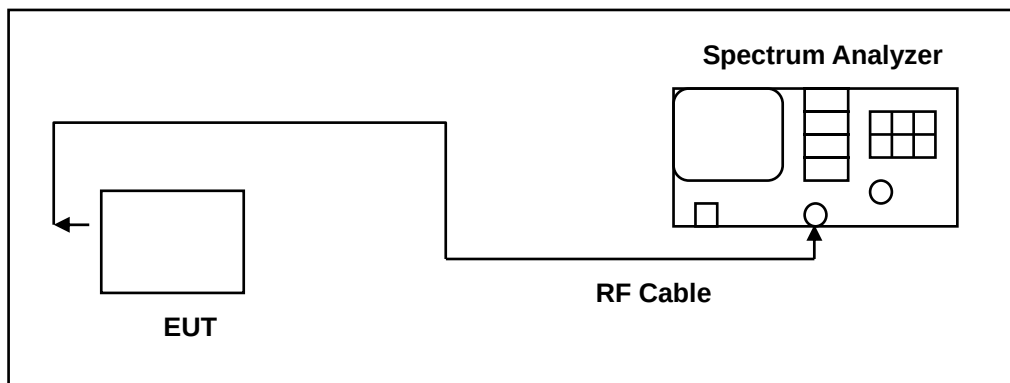
9 6dB RF Bandwidth Measurement

9.1. Limit

6dB RF Bandwidth

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

9.2. Test Setup



9.3. Test Instruments

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

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

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

9.4. Test Procedure

6dB RF Bandwidth

The EUT tested to UNII test procedure of KDB789033 D02 for compliance to FCC 47CFR 15.247 requirements.

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

The test was performed at 3 channels.

9.5. Test Result

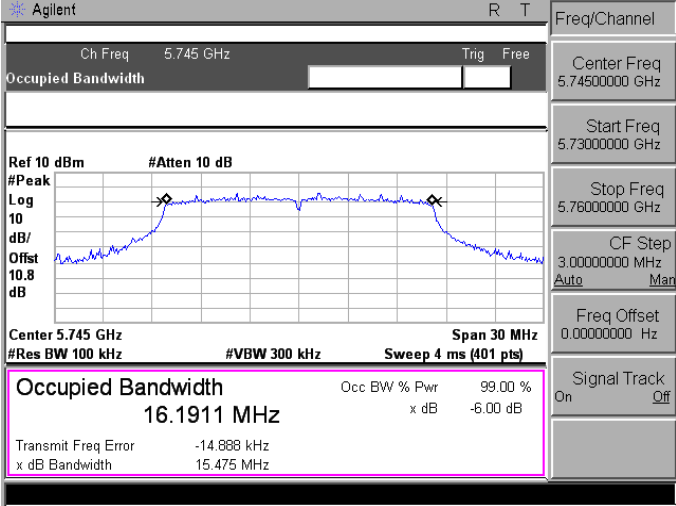
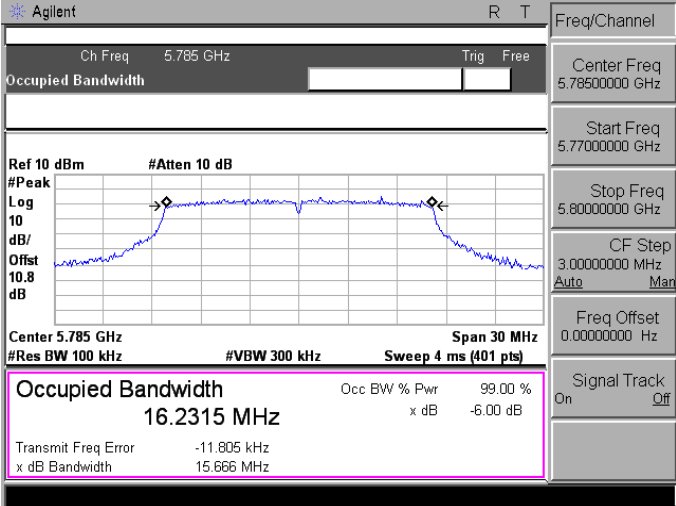
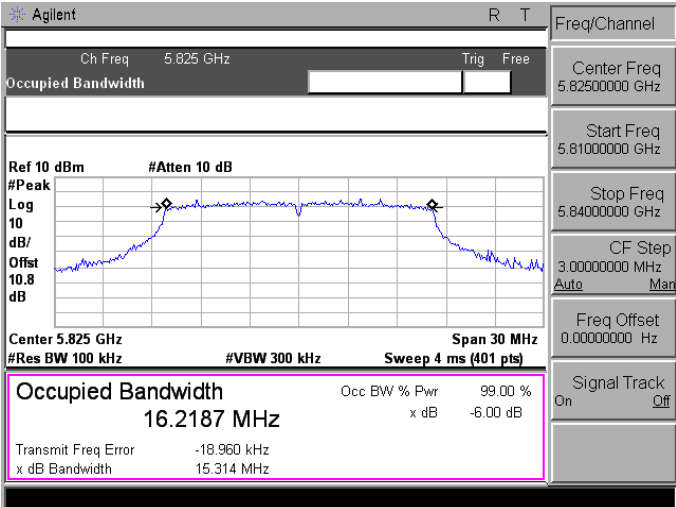
Model Number	AC791L		
Test Item	6dB RF Bandwidth		
Test Mode	Mode 2: IEEE 802.11a Link Mode		
Date of Test	06/17/2015	Test Site	TE05
Frequency (MHz)	Antenna 1	Limit (kHz)	
5745	15.475	> 500	
5785	15.666	> 500	
5825	15.314	> 500	

Model Number	AC791L		
Test Item	6dB RF Bandwidth		
Test Mode	Mode 3: IEEE 802.11n 20MHz Link Mode		
Date of Test	06/17/2015	Test Site	TE05
	Antenna 1	Antenna 2	Limit (kHz)
5745	15.156	16.339	> 500
5785	15.255	15.116	> 500
5825	15.372	15.801	> 500

Model Number	AC791L		
Test Item	6dB RF Bandwidth		
Test Mode	Mode 4: IEEE 802.11n 40MHz Link Mode		
Date of Test	06/17/2015	Test Site	TE05
Frequency (MHz)	Antenna 1	Antenna 2	Limit (kHz)
5755	35.159	35.143	> 500
5795	35.127	35.110	> 500

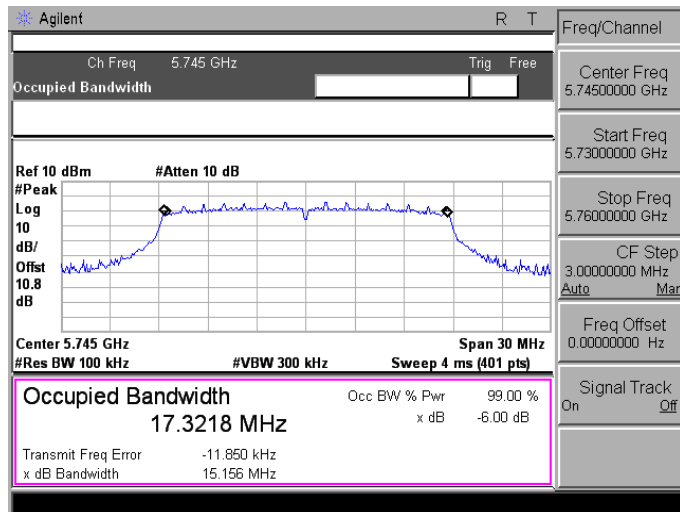
Model Number	AC791L		
Test Item	6dB RF Bandwidth		
Test Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode		
Date of Test	06/17/2015	Test Site	TE05
Frequency (MHz)	Antenna 1	Antenna 2	Limit (kHz)
5775	76.550	75.700	> 500

9.6. Test Graphs

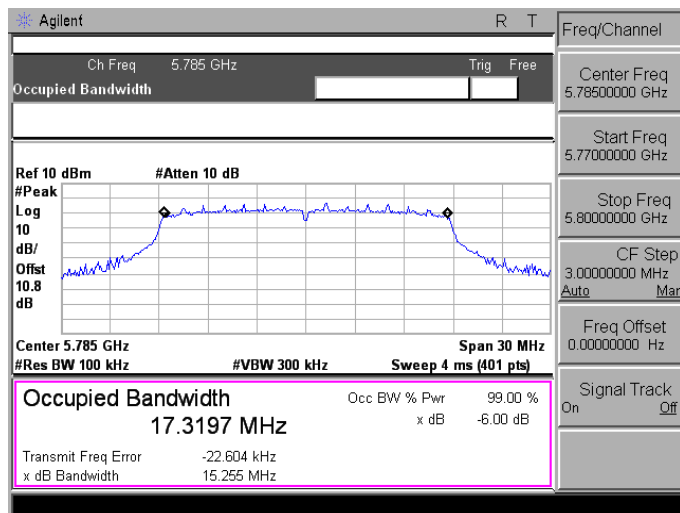
Mode 2: IEEE 802.11a Link Mode_Antenna 1	
5745	 Agilent R T Ch Freq 5.745 GHz Trig Free Occupied Bandwidth Ref 10 dBm #Peak Log 10 dB/Offset 10.8 dB Center 5.745 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.1911 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -14.888 kHz x dB Bandwidth 15.475 MHz Freq/Channel Center Freq 5.74500000 GHz Start Freq 5.73000000 GHz Stop Freq 5.76000000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5785	 Agilent R T Ch Freq 5.785 GHz Trig Free Occupied Bandwidth Ref 10 dBm #Peak Log 10 dB/Offset 10.8 dB Center 5.785 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.2315 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -11.805 kHz x dB Bandwidth 15.666 MHz Freq/Channel Center Freq 5.78500000 GHz Start Freq 5.77000000 GHz Stop Freq 5.80000000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5825	 Agilent R T Ch Freq 5.825 GHz Trig Free Occupied Bandwidth Ref 10 dBm #Peak Log 10 dB/Offset 10.8 dB Center 5.825 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts) Occupied Bandwidth 16.2187 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -18.960 kHz x dB Bandwidth 15.314 MHz Freq/Channel Center Freq 5.82500000 GHz Start Freq 5.81000000 GHz Stop Freq 5.84000000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 3: IEEE 802.11n 20MHz Link Mode_Antenna 1

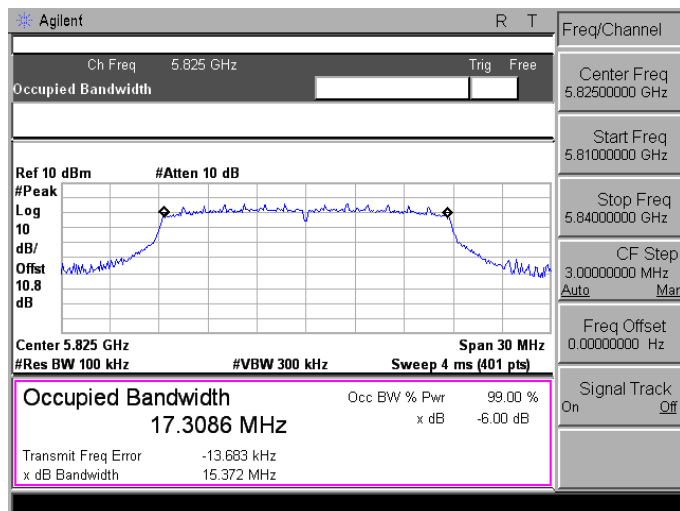
5745



5785

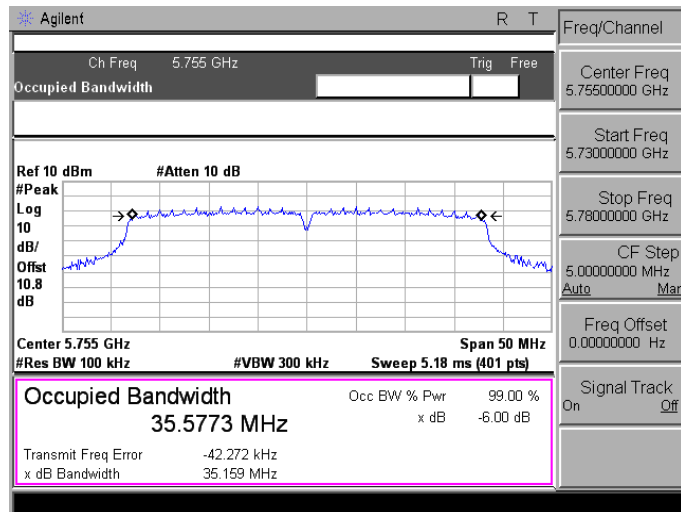


5825

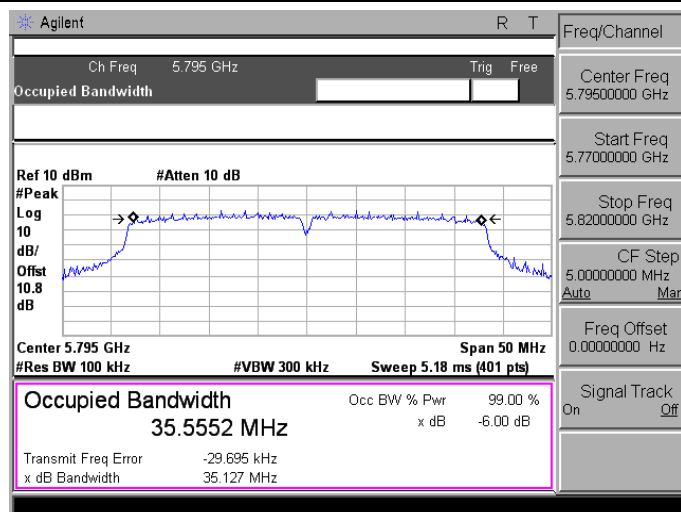


Mode 4: IEEE 802.11n 40MHz Link Mode_Antenna 1

5755

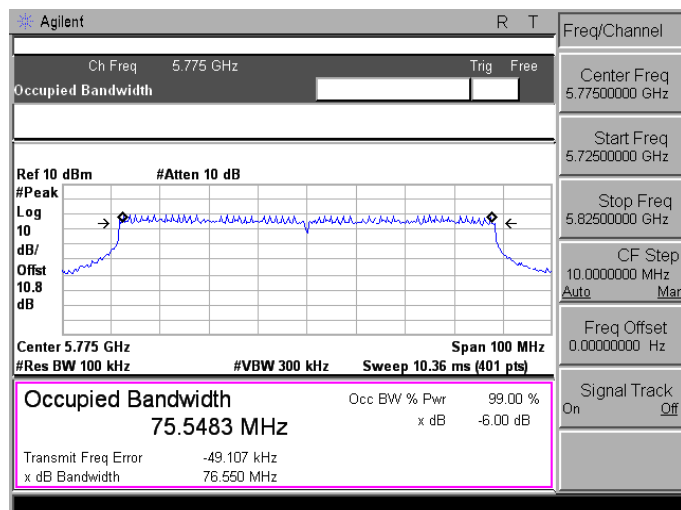


5795



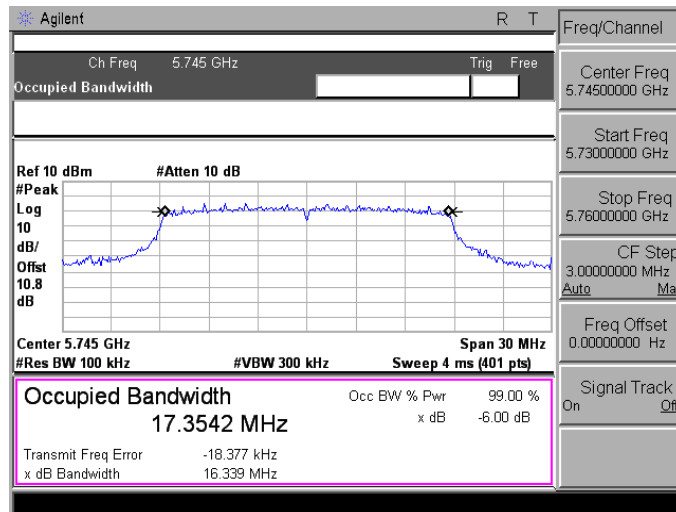
Mode 5: IEEE 802.11ac 80MHz Link Mode_Antenna 1

5775

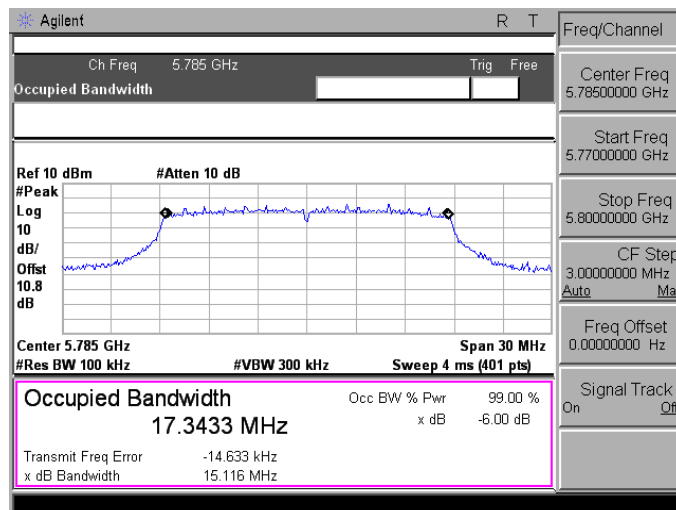


Mode 3: IEEE 802.11n 20MHz Link Mode_Antenna 2

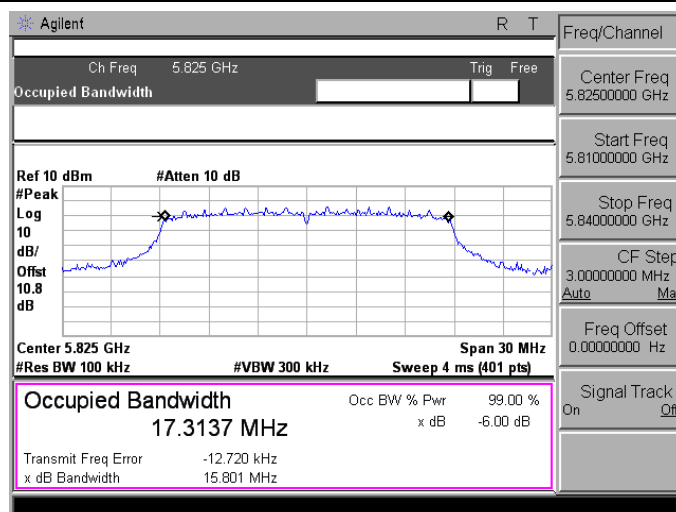
5745



5785

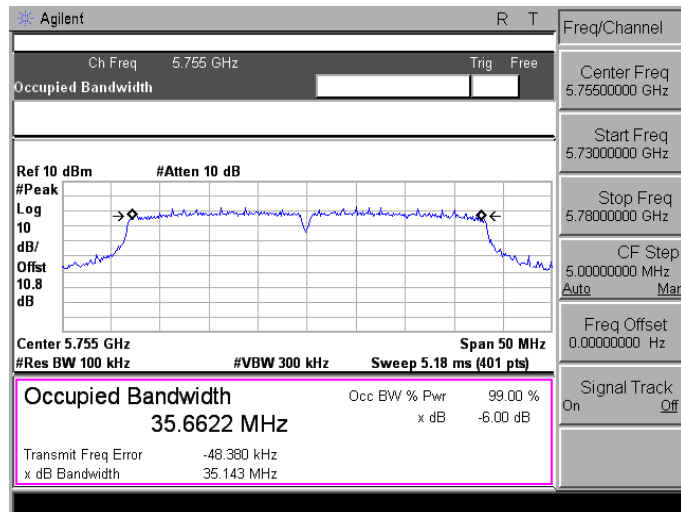


5825

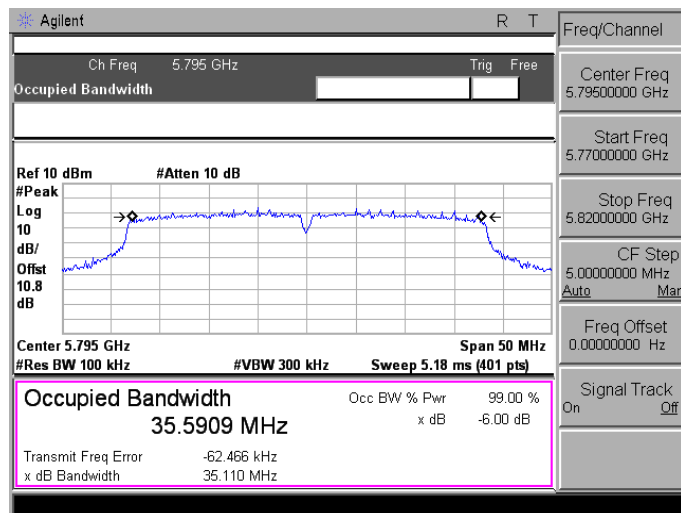


Mode 4: IEEE 802.11n 40MHz Link Mode_Antenna 2

5755

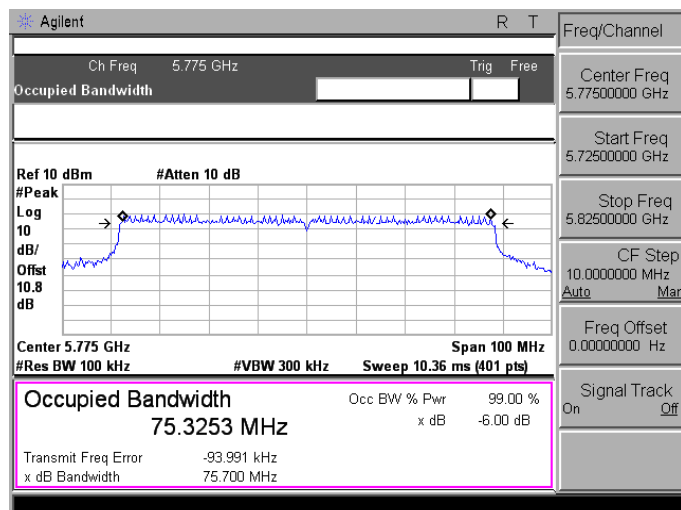


5795



Mode 5: IEEE 802.11ac 80MHz Link Mode_Antenna 2

5775



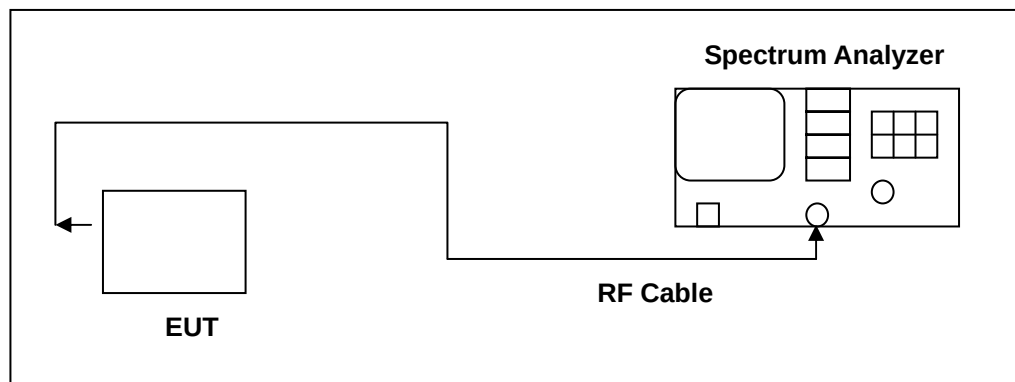
10 Peak Power Spectral Density Measurement

10.1. Limit

Conducted power spectral density

Frequency Range (MHz)	FCC Limit
5.150 ~ 5.250 GHz	11 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

10.2. Test Setup



10.3. Test Instruments

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

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

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

10.4. Test Procedure

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

10.5. Test Result

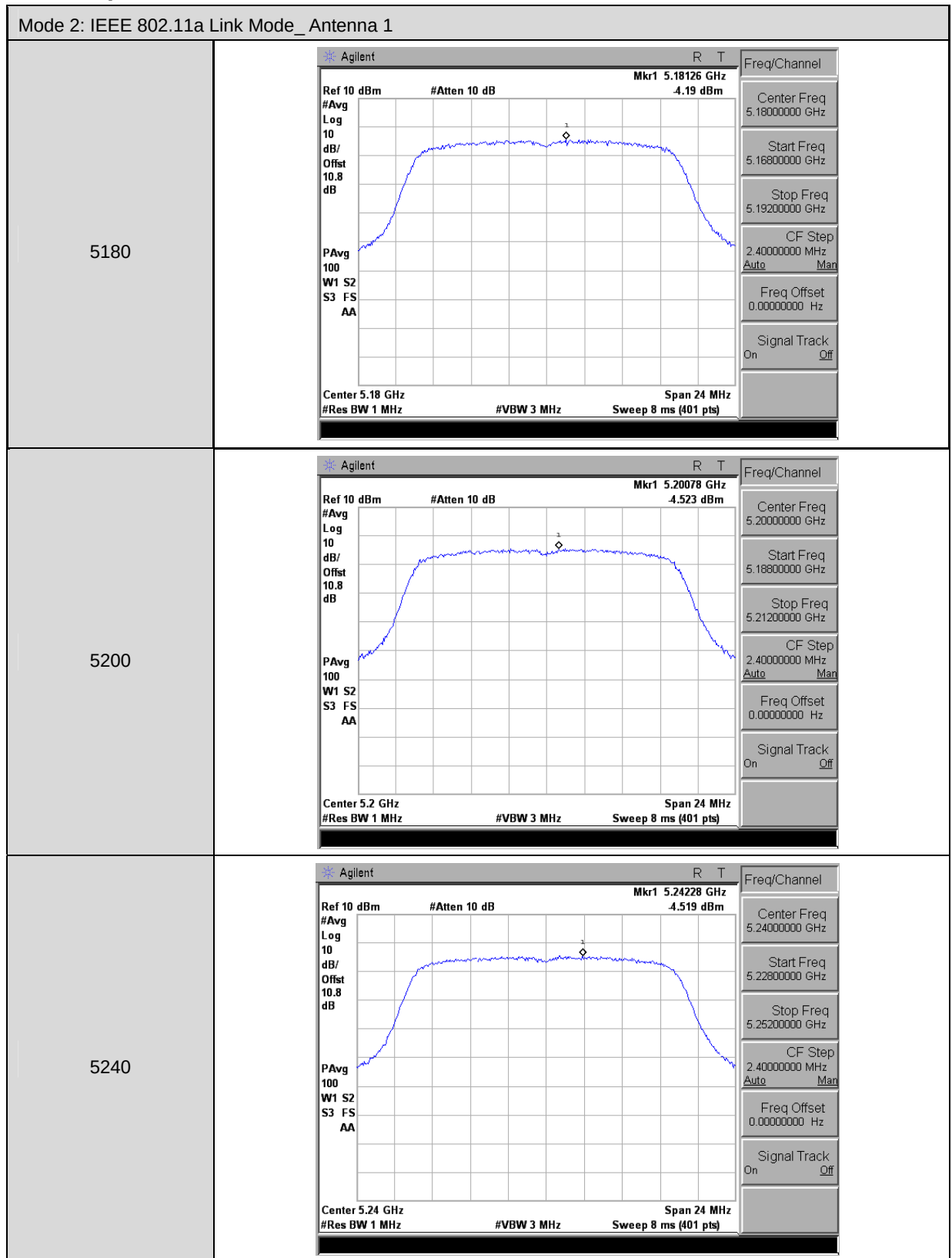
Model Number	AC791L						
Test Item	Conducted power spectral density						
Test Mode	Mode 2: IEEE 802.11a Link Mode						
Date of Test	06/10/2015, 06/17/2015			Test Site		TE02	
Frequency (MHz)	Antenna 1		Duty cycle (%)	Duty Factor (dB)	Result (dBm/MHz)	Limit (dBm/MHz)	
	Measurement (dBm/MHz)						
5180	-4.190		0.988	0.05	-4.14	<11	
5200	-4.523		0.988	0.05	-4.47		
5240	-4.519		0.988	0.05	-4.47		
Frequency (MHz)	Antenna 1		Duty cycle (%)	Duty Factor (dB)	Result (dBm/MHz)	Limit (dBm/500KHz)	
	Measurement (dBm/100KHz)	Measurement (dBm/500KHz)					
5745	-13.28	-6.29	0.988	0.05	-6.24	< 30	
5785	-13.19	-6.20	0.988	0.05	-6.15		
5825	-13.05	-6.06	0.988	0.05	-6.01		

Model Number	AC791L						
Test Item	Conducted power spectral density						
Test Mode	Mode 3: IEEE 802.11n 20MHz Link Mode						
Date of Test	06/09/2015, 06/17/2015				Test Site		TE02
Frequency (MHz)	Antenna 1	Antenna 2	Antenna 1+2	Duty cycle (%)	Duty Factor (dB)	Result (dBm/MHz)	Limit (dBm/MHz)
	Measurement (dBm/MHz)						
5180	-5.983	-6.678	-3.306	0.953	0.21	-3.10	<11
5200	-6.539	-6.787	-3.651	0.953	0.21	-3.44	
5220	-6.628	-6.867	-3.736	0.953	0.21	-3.53	
Frequency (MHz)	Antenna 1			Antenna 2			
	Measurement (dBm/100KHz)		Measurement (dBm/500KHz)	Measurement (dBm/100KHz)		Measurement (dBm/500KHz)	
5745	-14.07		-7.08	-14.13		-7.14	
5785	-13.54		-6.55	-13.77		-6.78	
5825	-13.35		-6.36	-13.88		-6.89	
Frequency (MHz)	Antenna 1+2		Duty cycle (%)	Duty Factor (dB)	Result (dBm/MHz)		Limit (dBm/500KHz)
	Measurement (dBm/500KHz)						
5745	-4.10		0.953	0.21	-3.89		< 30
5785	-3.65		0.953	0.21	-3.45		
5825	-3.61		0.953	0.21	-3.40		

Model Number	AC791L						
Test Item	Conducted power spectral density						
Test Mode	Mode 4: IEEE 802.11n 40MHz Link Mode						
Date of Test	06/09/2015, 06/17/2015				Test Site		TE02
Frequency (MHz)	Antenna 1	Antenna 2	Antenna 1+2	Duty cycle (%)	Duty Factor (dB)	Result (dBm/MHz)	Limit (dBm/MHz)
	Measurement (dBm/MHz)						
5190	-9.481	-9.744	-6.600	0.957	0.19	-6.41	<11
5230	-9.475	-9.998	-6.718	0.957	0.19	-6.53	
Frequency (MHz)	Antenna 1			Antenna 2			
	Measurement (dBm/100KHz)		Measurement (dBm/500KHz)	Measurement (dBm/100KHz)		Measurement (dBm/500KHz)	
5755	-17.37		-10.38	-17.51		-10.52	
5795	-16.71		-9.72	-16.97		-9.98	
Frequency (MHz)	Antenna 1+2		Duty cycle (%)	Duty Factor (dB)	Result (dBm/MHz)	Limit (dBm/500KHz)	
	Measurement (dBm/500KHz)						
5755	-7.44		0.957	0.19	-7.25	< 30	
5795	-6.84		0.957	0.19	-6.65		

Model Number	AC791L						
Test Item	Conducted power spectral density						
Test Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode						
Date of Test	05/06/2015, 06/17/2015				Test Site		TE02
Frequency (MHz)	Antenna 1	Antenna 2	Antenna 1+2	Duty cycle (%)	Duty Factor (dB)	Result (dBm/MHz)	Limit (dBm/MHz)
	Measurement (dBm/MHz)						
5210.	-11.480	-12.930	-9.134	0.886	0.52	-8.61	<11
Frequency (MHz)	Antenna 1			Antenna 2			
	Measurement (dBm/100KHz)		Measurement (dBm/500KHz)	Measurement (dBm/100KHz)		Measurement (dBm/500KHz)	
5210.	-21.65		-14.66	-22.25		-15.26	
Frequency (MHz)	Antenna 1+2		Duty cycle (%)	Duty Factor (dB)	Result (dBm/MHz)	Limit (dBm/500KHz)	
	Measurement (dBm/500KHz)						
5210.	-11.94		0.886	0.52	-11.42	< 30	

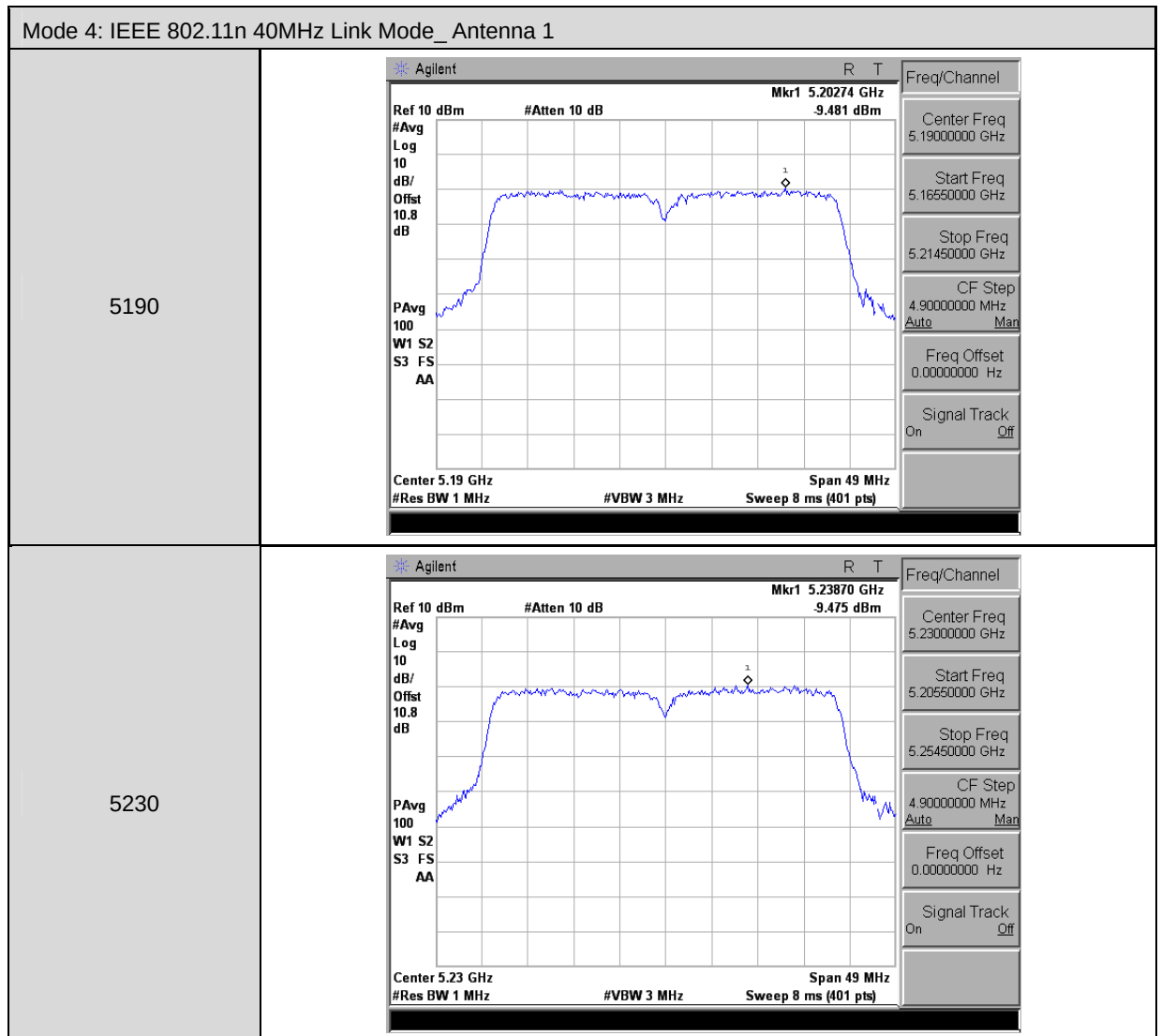
10.6. Test Graphs

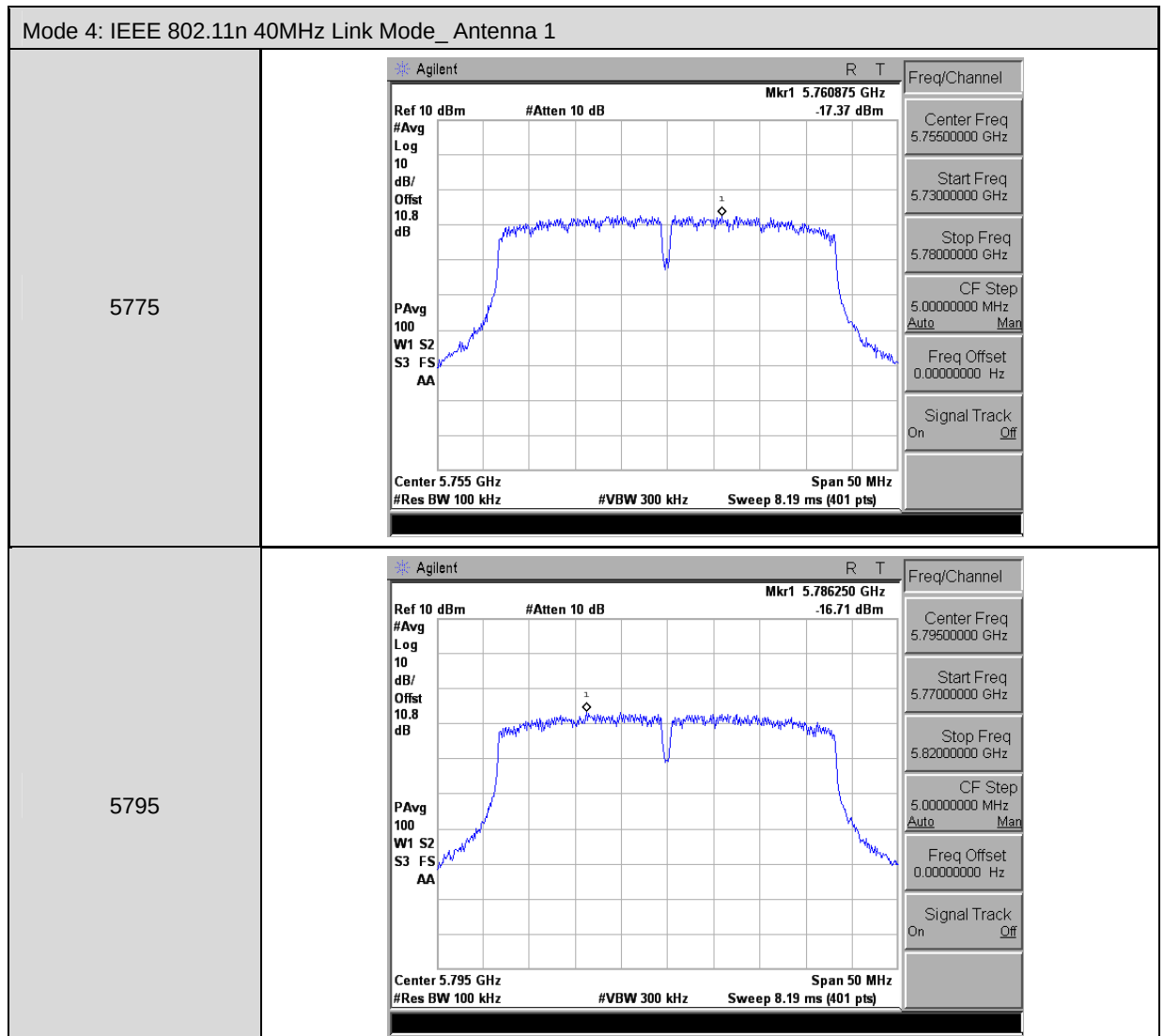


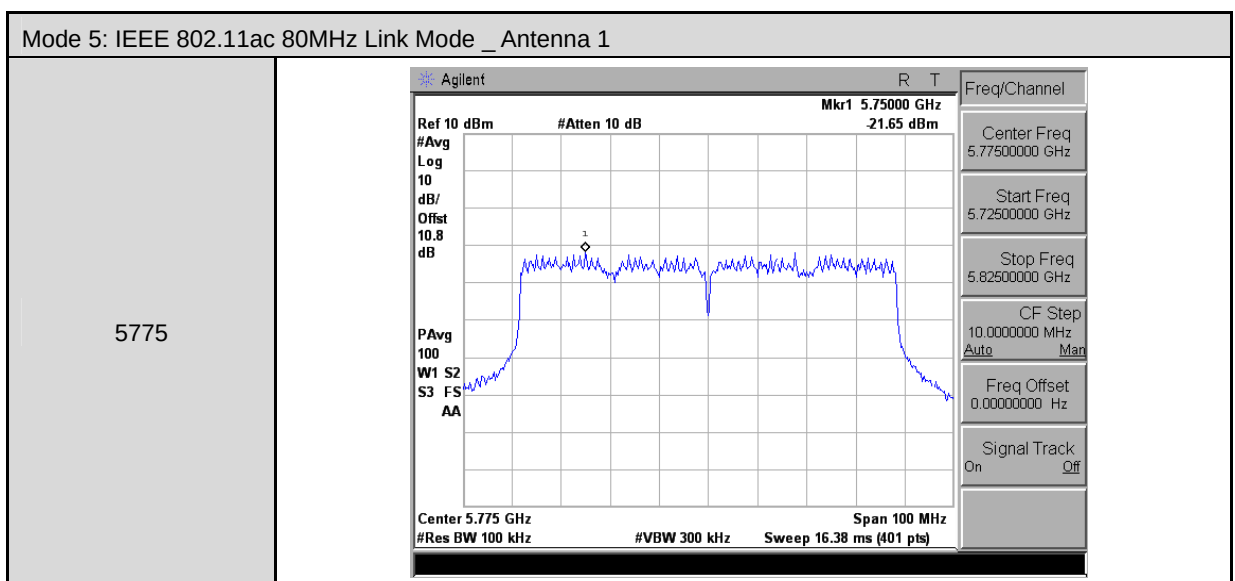
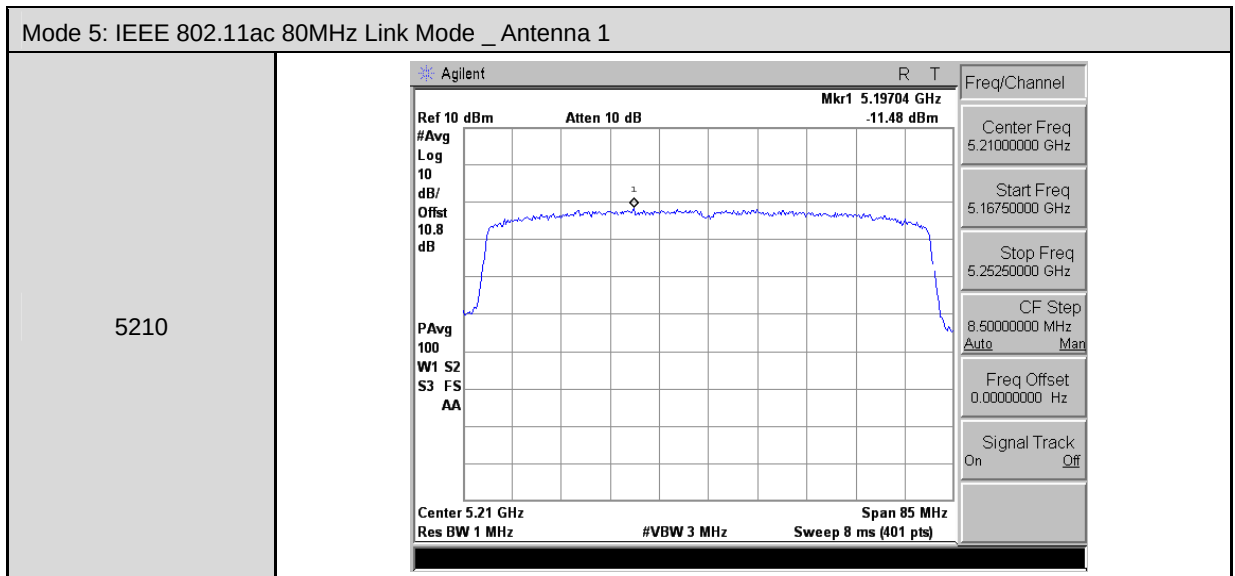
Mode 2: IEEE 802.11a Link Mode_ Antenna 1	
5745	
5785	
5825	

Mode 3: IEEE 802.11n 20MHz Link Mode _ Antenna 1	
5180	Agilent R T Ref 10 dBm #Atten 10 dB Mkr1 5.17447 GHz 5.983 dBm #Avg Log 10 dB/Offset 10.8 dB PAvg 100 W1 S2 S3 FS AA Center 5.18 GHz Span 28 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.18000000 GHz Start Freq 5.16600000 GHz Stop Freq 5.19400000 GHz CF Step 2.80000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5200	Agilent R T Ref 10 dBm #Atten 10 dB Mkr1 5.19510 GHz 6.539 dBm #Avg Log 10 dB/Offset 10.8 dB PAvg 100 W1 S2 S3 FS AA Center 5.2 GHz Span 28 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.20000000 GHz Start Freq 5.18600000 GHz Stop Freq 5.21400000 GHz CF Step 2.80000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
5220	Agilent R T Ref 10 dBm #Atten 10 dB Mkr1 5.21608 GHz 6.628 dBm #Avg Log 10 dB/Offset 10.8 dB PAvg 100 W1 S2 S3 FS AA Center 5.22 GHz Span 28 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Freq/Channel Center Freq 5.22000000 GHz Start Freq 5.20600000 GHz Stop Freq 5.23400000 GHz CF Step 2.80000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 3: IEEE 802.11n 20MHz Link Mode _ Antenna 1	
5745	
5785	
5825	

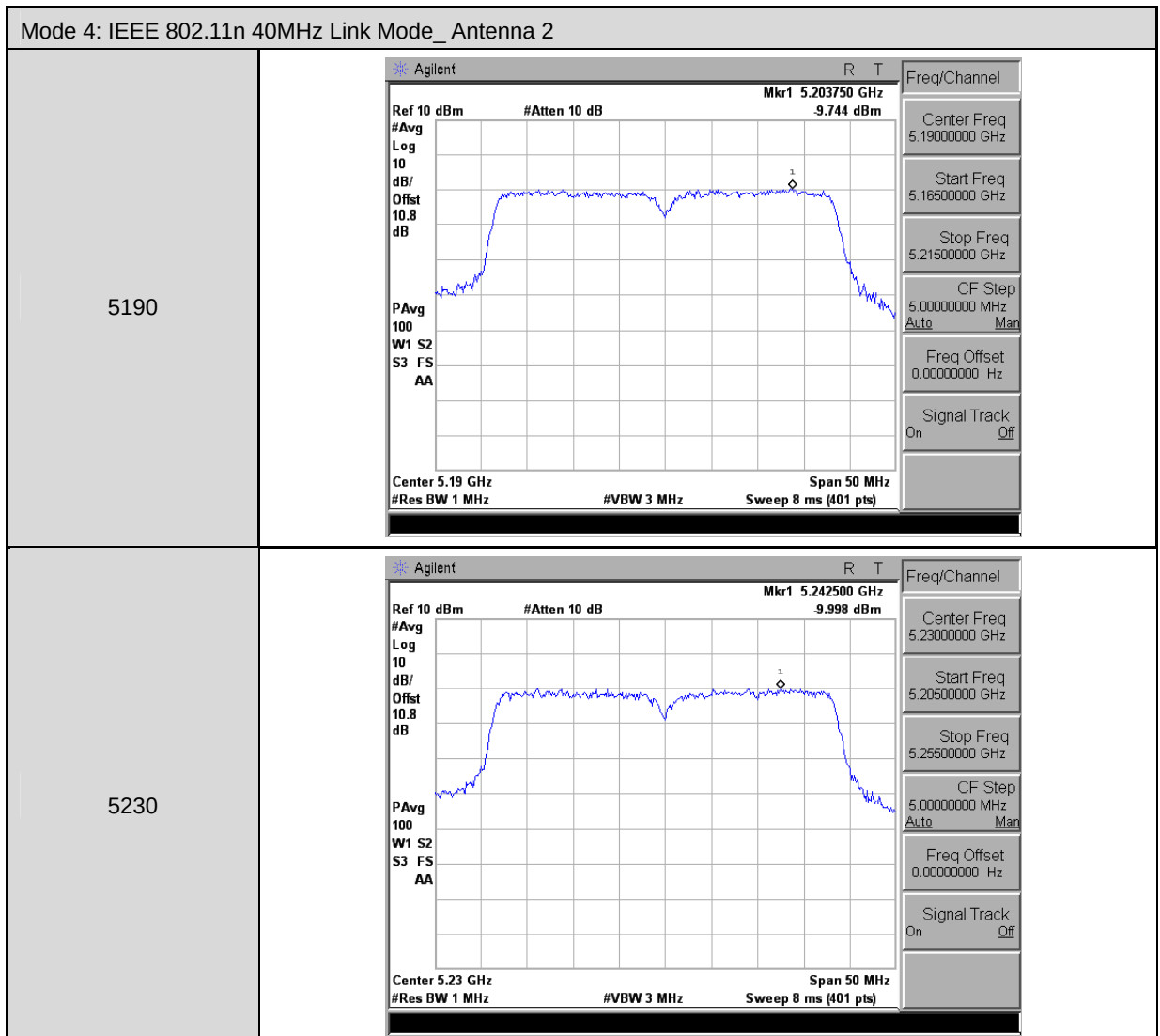


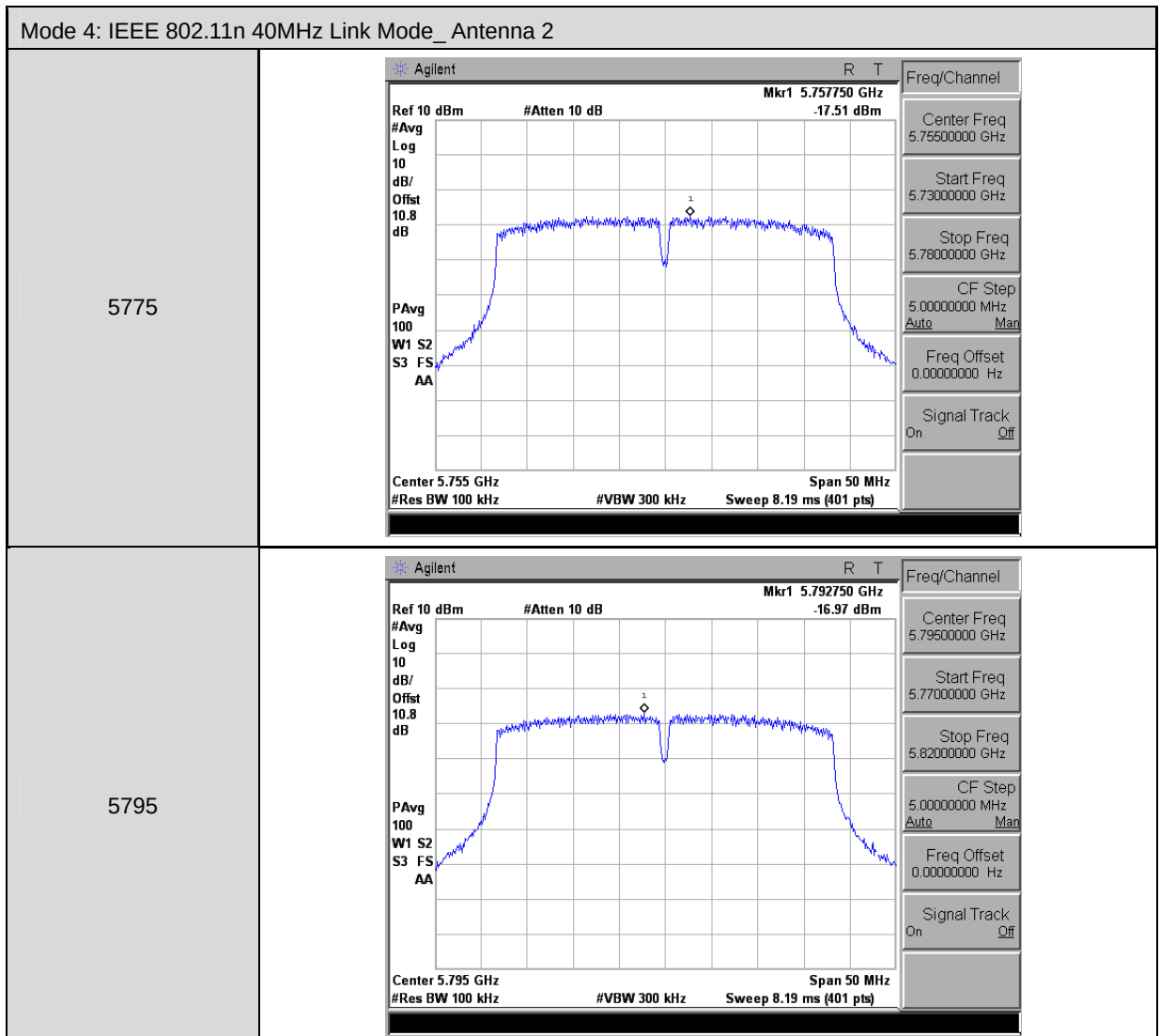


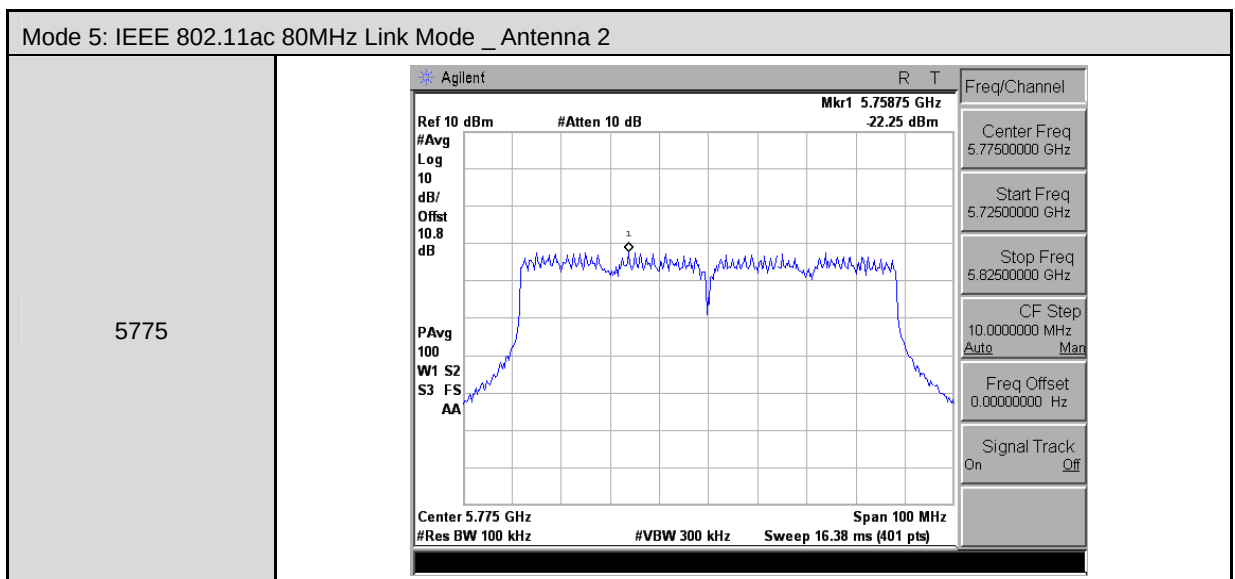
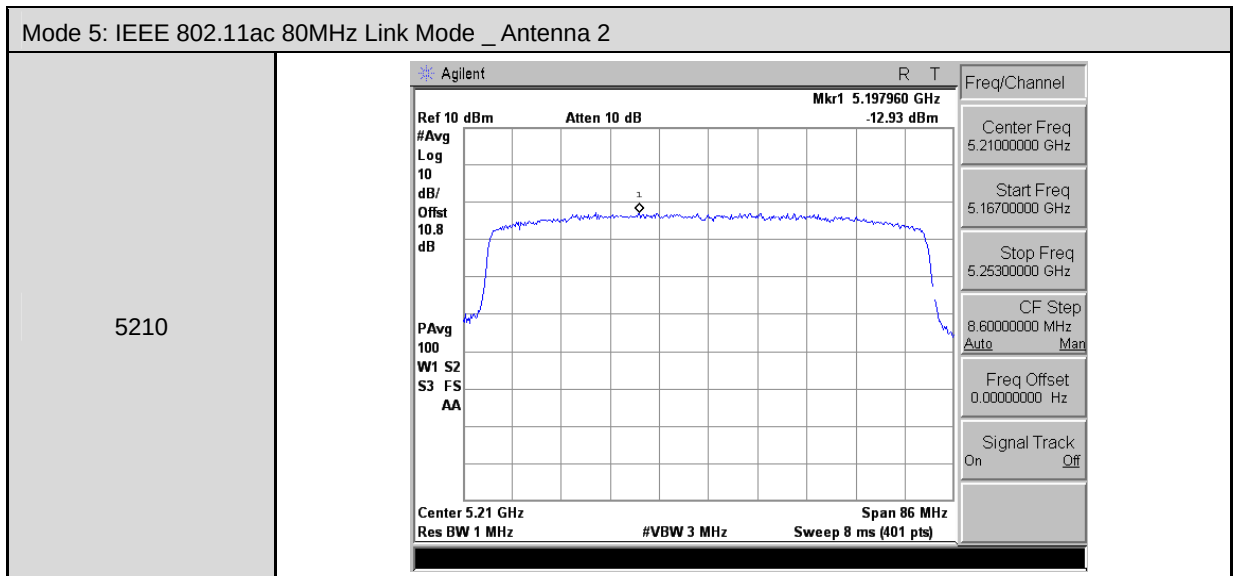


Mode 3: IEEE 802.11n 20MHz Link Mode _ Antenna 2	
5180	
5200	
5220	

Mode 3: IEEE 802.11n 20MHz Link Mode _ Antenna 2	
5745	
5785	
5825	





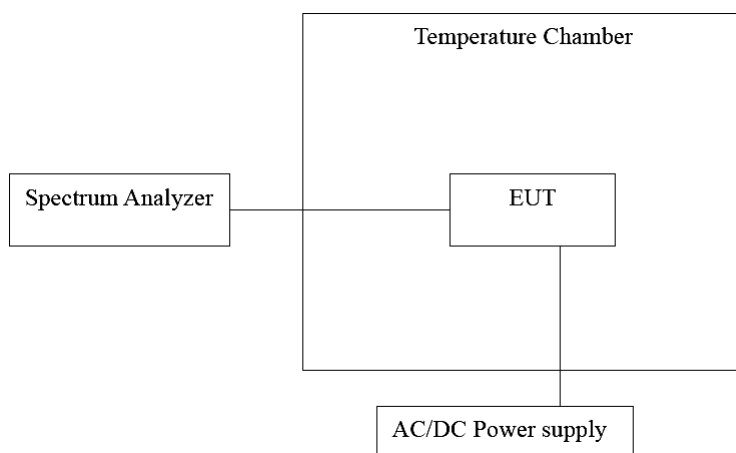


11 Frequency Stability Measurement

11.1. Limit

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

11.2. Test Setup



11.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4408B	MY45107753	07/24/2014	(1)
Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	08/14/2014	(1)
Test Site	ATL	TE02	TE02	N.C.R.	-----

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

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

11.4. Test Procedure

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

11.5. Test Result

Model Number	AC791L				
Test Mode	Mode 2				
Frequency	5200 MHz				
Date of Test	06/10/2015			Test Site	TE02
Temp. (°C)	Voltage (Vdc)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
0	3.80	5199.9828	-17200	-3.308	Pass
10		5199.9840	-16000	-3.077	Pass
20		5199.9911	-8900	-1.712	Pass
30		5199.9875	-12500	-2.404	Pass
40		5199.9936	-6400	-1.231	Pass
50		5200.0028	2800	0.538	Pass

Model Number	AC791L				
Test Mode	Mode 2				
Frequency	5200 MHz				
Date of Test	06/10/2015			Test Site	TE02
Temp. (°C)	Voltage (Vdc)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
20	4.35	5199.9777	-22300	-4.288	Pass
	3.80	5199.9874	-12600	-2.423	Pass
	3.50	5199.9948	-5200	-1.000	Pass

Note: The manufacturer's frequency stability specification is better than 20ppm.

Model Number	AC791L				
Test Mode	Mode 2				
Frequency	5785 MHz				
Date of Test	06/17/2015			Test Site	TE02
Temp. (°C)	Voltage (Vdc)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
0	3.80	5784.9793	-20700	-3.578	Pass
10		5784.9449	-55100	-9.525	Pass
20		5785.0010	1000	0.173	Pass
30		5785.0184	18400	3.181	Pass
40		5785.0013	1300	0.225	Pass
50		5785.0716	71600	12.377	Pass

Model Number	AC791L				
Test Mode	Mode 2				
Frequency	5785 MHz				
Date of Test	06/17/2015			Test Site	TE02
Temp. (°C)	Voltage (Vdc)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
20	4.35	5784.9705	-29500	-5.099	Pass
	3.80	5785.0010	1000	0.173	Pass
	3.50	5785.0312	31200	5.393	Pass

Note: The manufacturer's frequency stability specification is better than 20ppm.

Model Number	AC791L				
Test Mode	Mode 3				
Frequency	5200 MHz				
Date of Test	06/09/2015			Test Site	TE02
Temp. (°C)	Voltage (Vdc)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
0	3.80	5199.9947	-5300	-1.019	Pass
10		5199.9992	-800	-0.154	Pass
20		5200.0082	8200	1.577	Pass
30		5200.0123	12300	2.365	Pass
40		5200.0173	17300	3.327	Pass
50		5200.0214	21400	4.115	Pass

Model Number	AC791L				
Test Mode	Mode 3				
Frequency	5200 MHz				
Date of Test	06/09/2015			Test Site	TE02
Temp. (°C)	Voltage (Vdc)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
20	4.35	5199.9996	-400	-0.077	Pass
	3.80	5200.0112	11200	2.154	Pass
	3.50	5200.0138	13800	2.654	Pass

Note: The manufacturer's frequency stability specification is better than 20ppm.

Model Number	AC791L				
Test Mode	Mode 3				
Frequency	5785 MHz				
Date of Test	06/17/2015			Test Site	TE02
Temp. (°C)	Voltage (Vdc)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
0	3.80	5784.9889	-11100	-1.919	Pass
10		5784.9431	-56900	-9.836	Pass
20		5785.0010	1000	0.173	Pass
30		5785.0968	96800	16.733	Pass
40		5785.0159	15900	2.748	Pass
50		5785.0597	59700	10.320	Pass

Model Number	AC791L				
Test Mode	Mode 2				
Frequency	5785 MHz				
Date of Test	06/17/2015			Test Site	TE02
Temp. (°C)	Voltage (Vdc)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
20	4.35	5784.9348	-65200	-11.271	Pass
	3.80	5785.0010	1000	0.173	Pass
	3.50	5785.0901	90100	15.575	Pass

Note: The manufacturer's frequency stability specification is better than 20ppm.

Model Number	AC791L				
Test Mode	Mode 4				
Frequency	5230 MHz				
Date of Test	06/09/2015			Test Site	TE02
Temp. (°C)	Voltage (Vdc)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
0	3.80	5229.9929	-7100	-1.358	Pass
10		5230.0018	1800	0.344	Pass
20		5230.0083	8300	1.587	Pass
30		5230.0105	10500	2.008	Pass
40		5230.0113	11300	2.161	Pass
50		5230.0166	16600	3.174	Pass

Model Number	AC791L				
Test Mode	Mode 4				
Frequency	5230 MHz				
Date of Test	06/09/2015			Test Site	TE02
Temp. (°C)	Voltage (Vdc)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
20	4.35	5230.0041	4100	0.784	Pass
	3.80	5230.0032	3200	0.612	Pass
	3.50	5230.0105	10500	2.008	Pass

Note: The manufacturer's frequency stability specification is better than 20ppm.

Model Number	AC791L				
Test Mode	Mode 4				
Frequency	5795 MHz				
Date of Test	06/17/2015			Test Site	TE02
Temp. (°C)	Voltage (Vdc)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
0	3.80	5794.9424	-57600	-9.940	Pass
10		5794.9844	-15600	-2.692	Pass
20		5795.001	1000	0.173	Pass
30		5795.0739	73900	12.752	Pass
40		5795.0191	19100	3.296	Pass
50		5795.0161	16100	2.778	Pass

Model Number	AC791L				
Test Mode	Mode 4				
Frequency	5795 MHz				
Date of Test	06/17/2015			Test Site	TE02
Temp. (°C)	Voltage (Vdc)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
20	4.35	5794.9800	-20000	-3.451	Pass
	3.80	5795.0010	1000	0.173	Pass
	3.50	5795.0083	8300	1.432	Pass

Note: The manufacturer's frequency stability specification is better than 20ppm.

Model Number	AC791L				
Test Mode	Mode 5				
Frequency	5210 MHz				
Date of Test	05/06/2015			Test Site	TE02
Temp. (°C)	Voltage (Vdc)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
0	3.80	5210.0018	1750	0.336	Pass
10		5210.0014	1350	0.259	Pass
20		5210.0007	670	0.129	Pass
30		5209.9983	-1680	-0.322	Pass
40		5209.9908	-9250	-1.775	Pass
50		5209.9857	-14270	-2.739	Pass

Model Number	AC791L				
Test Mode	Mode 5				
Frequency	5210 MHz				
Date of Test	05/06/2015			Test Site	TE02
Temp. (°C)	Voltage (Vdc)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
20	4.35	5210.0015	1510	0.290	Pass
	3.80	5210.0007	670	0.129	Pass
	3.50	5210.0007	710	0.136	Pass

Note: The manufacturer's frequency stability specification is better than 20ppm.

Model Number	AC791L				
Test Mode	Mode 5				
Frequency	5775 MHz				
Date of Test	06/17/2015			Test Site	TE02
Temp. (°C)	Voltage (Vdc)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
0	3.80	5775.0929	92900	16.087	Pass
10		5775.0350	35000	6.061	Pass
20		5775.0260	26000	4.502	Pass
30		5774.9074	-92600	-16.035	Pass
40		5774.9163	-83700	-14.494	Pass
50		5774.9698	-30200	-5.229	Pass

Model Number	AC791L				
Test Mode	Mode 5				
Frequency	5775 MHz				
Date of Test	06/17/2015			Test Site	TE02
Temp. (°C)	Voltage (Vdc)	Measured Frequency (MHz)	Delta Frequency (Hz)	Tolerance (ppm)	Result (Pass/Fail)
20	4.35	5775.0395	39500	6.840	Pass
	3.80	5775.0260	26000	4.502	Pass
	3.50	5774.9963	-3700	-0.641	Pass

Note: The manufacturer's frequency stability specification is better than 20ppm.

12 Antenna Requirement

12.1. Limit

For intentional device, according to 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

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

12.2. Antenna Connector Construction

The antenna used in this product is Internal IFA type. And the maximum Gain of this antenna is only 5 dBi.