

FCC 47 CFR PART 15 SUBPART E

Applicant : TP-LINK TECHNOLOGIES CO., LTD.
Product Type : AC1750 Wireless Dual Band Gigabit Router
Trade Name : TP-LINK
Model Number : Archer C7
Test Specification : FCC 47 CFR PART 15 SUBPART E
ANSI C63.10:2013
Receive Date : Jun. 21, 2016
Test Period : Jul. 05 ~ Jul. 19, 2016
Issue Date : Aug. 19, 2016

Issue by

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Taiwan Accreditation Foundation accreditation number: 1330

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Revision History

Rev.	Issue Date	Revisions	Revised By
00	Jul. 27, 2016	Initial Issue	Snow Wang
01	Aug. 19, 2016	Revised report information.	Snow Wang



Verification of Compliance

Issued Date: Aug. 19, 2016

Applicant : TP-LINK TECHNOLOGIES CO., LTD.
Product Type : AC1750 Wireless Dual Band Gigabit Router
Trade Name : TP-LINK
Model Number : Archer C7
FCC ID : TE7C7V4
EUT Rated Voltage : DC 12V, 2A
Test Voltage : 120 Vac / 60 Hz
Applicable Standard : FCC 47 CFR PART 15 SUBPART E
ANSI C63.10:2013
Test Result : Complied
Performing Lab. : A Test Lab Techno Corp.
No. 140-1, Changan Street, Bade District,
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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 Reviewed By : Eric Ou Yang
(Manager) (Fly Lu) (Testing Engineer) (Eric Ou Yang)



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1 General Information

1.1. Summary of Test Result

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

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

1.2. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty
Conducted Emission	9kHz ~ 150KHz	2.7 dB
	150kHz ~ 30MHz	2.8 dB
Radiated Emission	9kHz ~ 30MHz	1.457 dB
	30MHz ~ 1000MHz	6.300 dB
	1000MHz ~ 18000MHz	5.474 dB
	18000MHz ~ 26500MHz	5.630 dB
	26500MHz ~ 40000MHz	5.054 dB
Conducted Output Power		+0.27 dB / -0.28 dB
RF Bandwidth		4.96%
Power Spectral Density		+0.71 dB / -0.77 dB
Frequency Stability		+ 2.212 x 10 ⁻⁷ % / - 2.170 x 10 ⁻⁷ %
Duty Cycle		1.06%
Time Occupancy		1.40%



2 EUT Description

Applicant	TP-LINK TECHNOLOGIES CO., LTD. Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park,Shennan Rd, Nanshan, Shenzhen,China			
Manufacturer	TP-LINK TECHNOLOGIES CO., LTD. Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park,Shennan Rd, Nanshan, Shenzhen,China			
Product Type	AC1750 Wireless Dual Band Gigabit Router			
Trade Name	TP-LINK			
Model No.	Archer C7			
FCC ID	TE7C7V4			
Operate Frequency	Frequency Band		Frequency Range (MHz)	Number of Channels
	IEEE 802.11a	U-NII Band I	5180 – 5240	4
		U-NII Band III	5745 – 5825	5
	IEEE 802.11n 20 MHz / IEEE 802.11ac 20 MHz	U-NII Band I	5180 – 5240	4
		U-NII Band III	5745 – 5825	5
	IEEE 802.11n 40 MHz / IEEE 802.11ac 40 MHz	U-NII Band I	5190 – 5230	2
		U-NII Band III	5755 – 5795	2
	IEEE 802.11ac 80 MHz	U-NII Band I	5210	1
U-NII Band III		5775	1	
Modulation Type	OFDM			
Equipment Type	Indoor access point			
Antenna information	Type		Max. Gain (dBi)	
	Dipole Antenna		5	
Antenna Delivery	See section 3.1			
Frequency stability specification	± 20 ppm			

Frequency Band		RF Output Power (W)
IEEE 802.11a	U-NII Band I	0.281
	U-NII Band III	0.345
IEEE 802.11ac 20 MHz	U-NII Band I	0.268
	U-NII Band III	0.344
IEEE 802.11ac 40 MHz	U-NII Band I	0.273
	U-NII Band III	0.375
IEEE 802.11ac 80 MHz	U-NII Band I	0.031
	U-NII Band III	0.144



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 802.11ac 20MHz Link Mode
Mode 4: IEEE 802.11ac 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.

By preliminary testing and verifying three axis (X, Y and Z) position of EUT transmitted status, it was found that "X axis" position was the worst, then the final test was executed the worst condition and test data were recorded in this report.

Equipment Type	
Outdoor access point	---
Indoor access point	V
Fixed point-to-point access points	---
Client devices	---

Test Mode	ANT-0	ANT-1	ANT-2	ANT-0+1+2
Mode 2	V	V	V	V
Mode 3	V	V	V	V
Mode 4	V	V	V	V
Mode 5	V	V	V	V

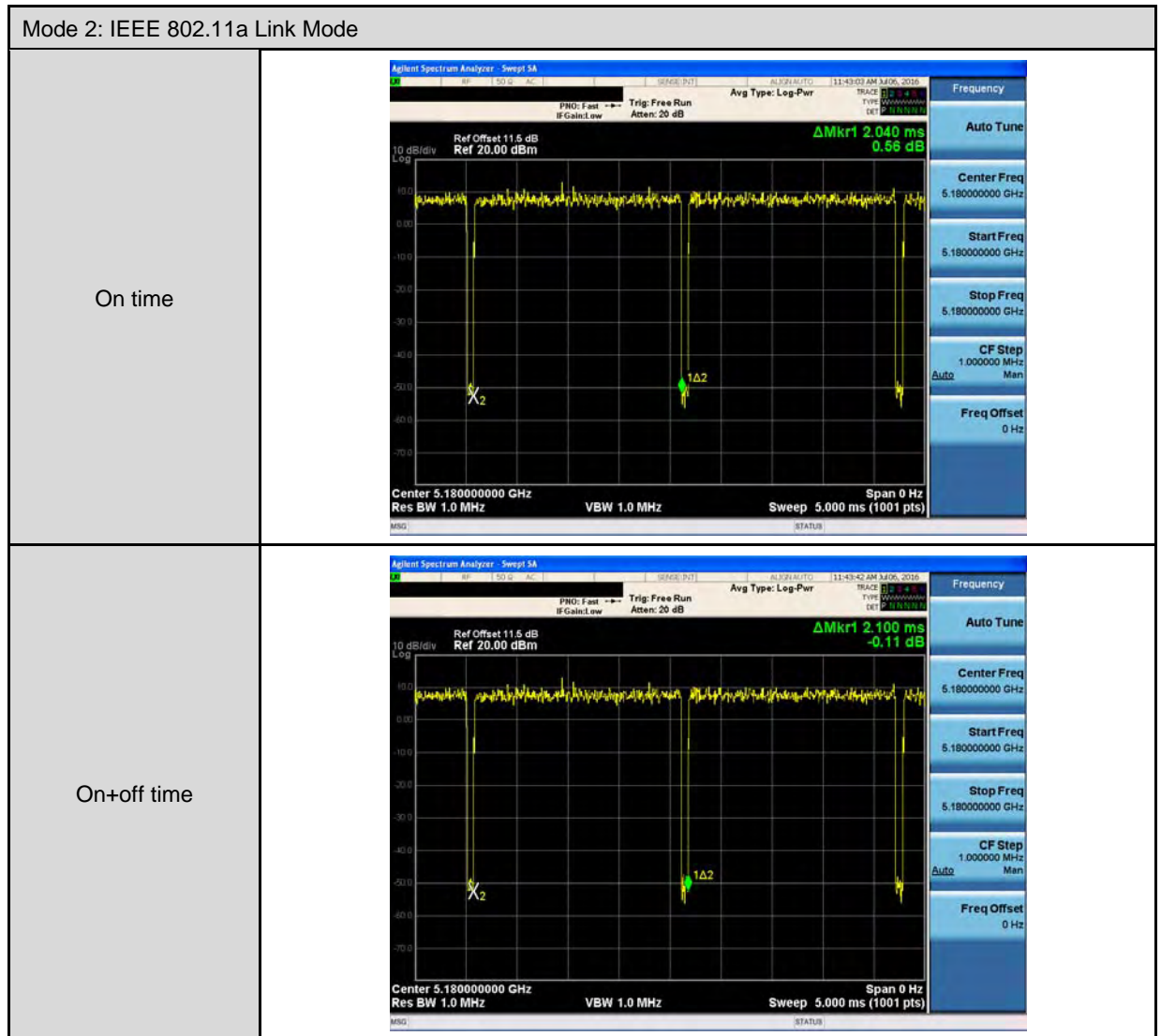
Test Mode	Band	Data Rate	Test Channel
Mode 2	U-NII Band I	6M	36, 40, 44, 48
	U-NII Band III		149,153,157,161,165
Mode 3	U-NII Band I	19.5M	36, 40, 44, 48
	U-NII Band III		149,153,157,161,165
Mode 4	U-NII Band I	40.5M	38, 46
	U-NII Band III		151,159
Mode 5	U-NII Band I	87.9M	42
	U-NII Band III		155

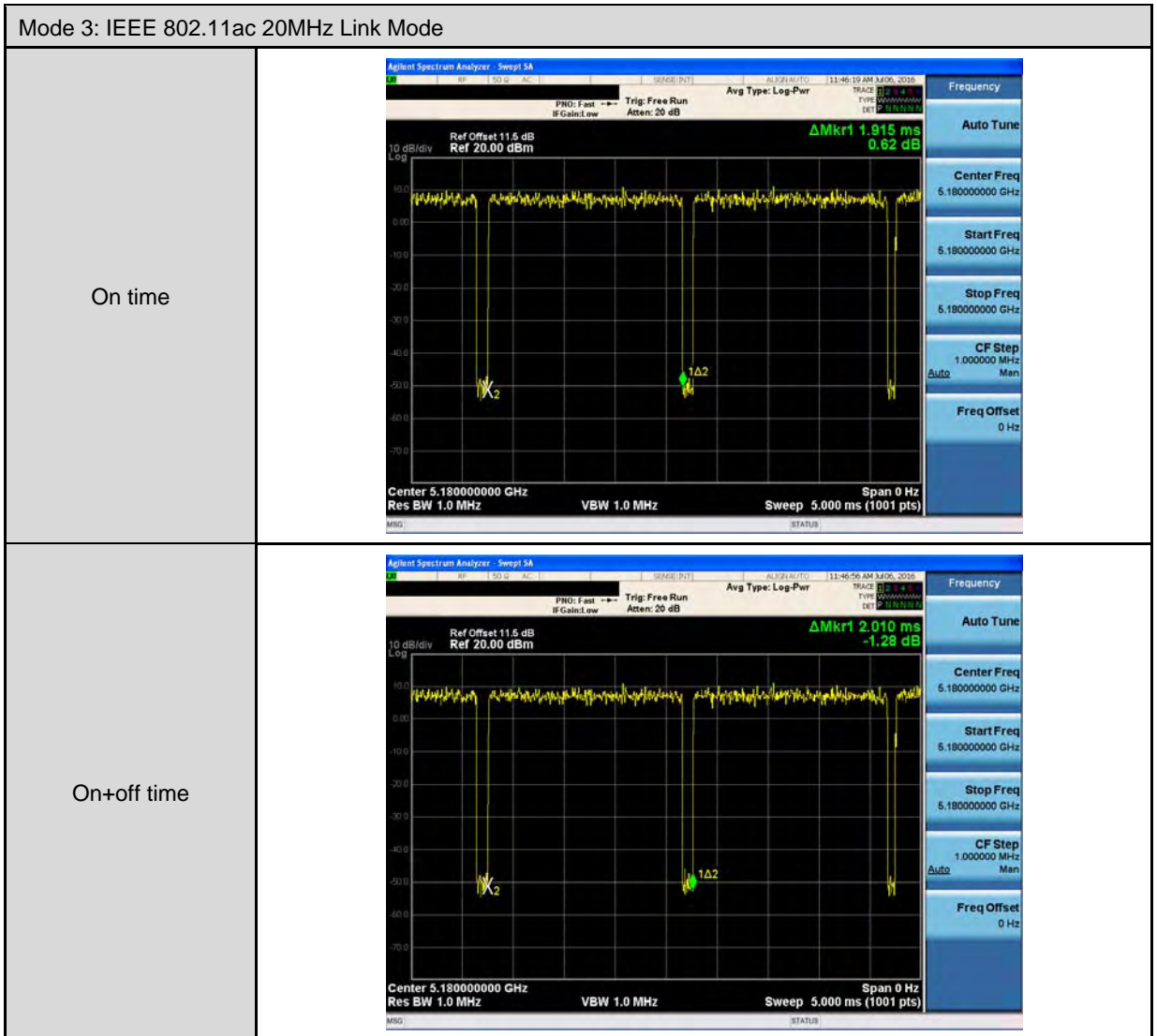


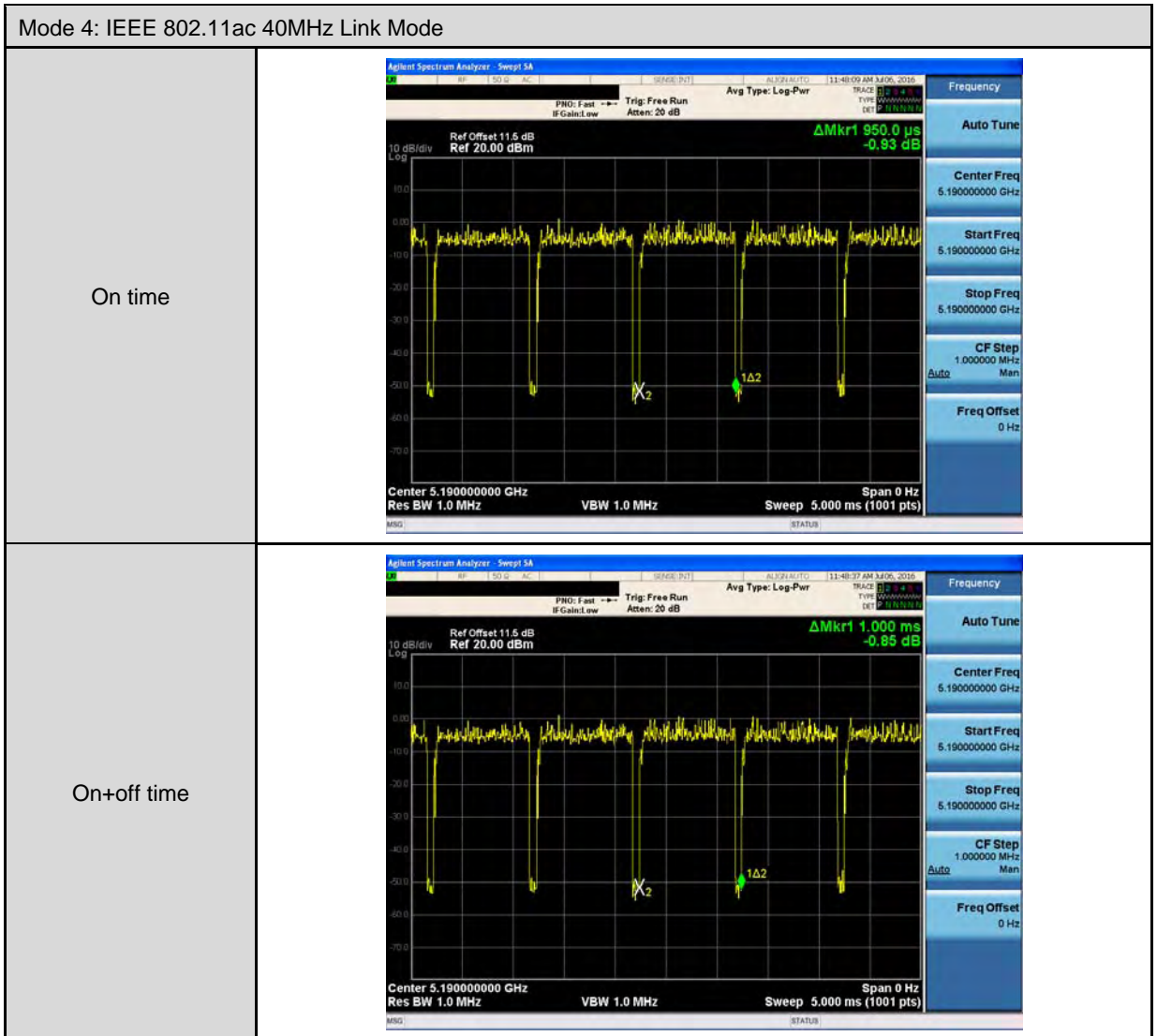
Duty cycle

Test Mode	Frequency (MHz)	on time (ms)	on+off time (ms)	Duty cycle	Duty Factor (dB)	1/T Minimum VBW (kHz)
Mode 2: IEEE 802.11a Link Mode	5180.0	2.040	2.100	0.971	0.126	0.490
Mode 3: IEEE 802.11ac 20MHz Link Mode	5180.0	1.915	2.010	0.953	0.210	0.522
Mode 4: IEEE 802.11ac 40MHz Link Mode	5190.0	0.950	1.000	0.950	0.223	1.053
Mode 5: IEEE 802.11ac 80MHz Link Mode	5210.0	0.462	0.522	0.885	0.530	2.165

Duty Cycle Graphs







Mode 5: IEEE 802.11ac 80MHz Link Mode	
On time	 <p>Agilent Spectrum Analyzer - Smp1 5A Ref Offset 11.5 dB Ref 20.00 dBm ΔMkr1 462.0 μs -0.25 dB Center 5.210000000 GHz Res BW 1.0 MHz VBW 1.0 MHz Sweep 3.000 ms (1001 pts)</p>
On+off time	 <p>Agilent Spectrum Analyzer - Smp1 5A Ref Offset 11.5 dB Ref 20.00 dBm ΔMkr1 522.0 μs -4.41 dB Center 5.210000000 GHz Res BW 1.0 MHz VBW 1.0 MHz Sweep 3.000 ms (1001 pts)</p>

3.2. EUT Exercise Software

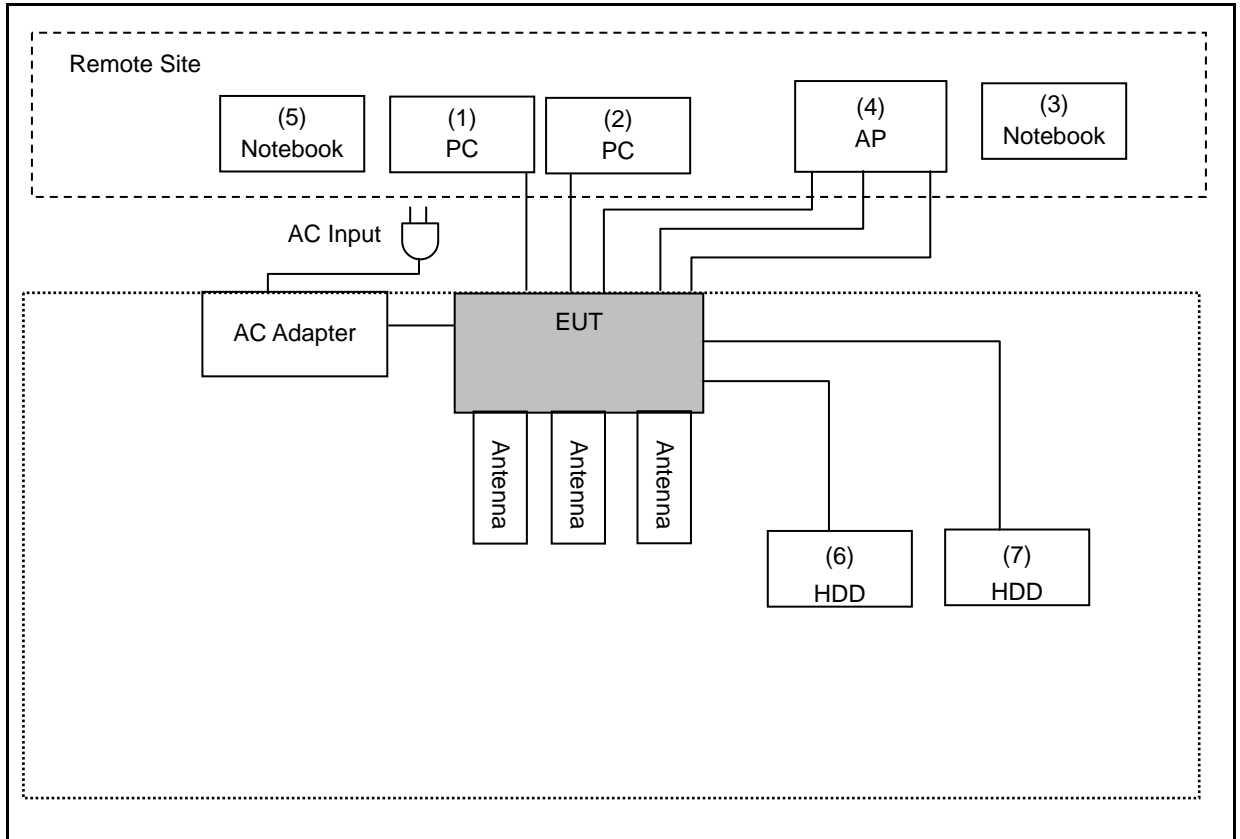
The EUT is operated in the engineering mode to fix the TX frequency for the purposes of measurement. According to its specifications, the EUT must comply with the requirements of Section 15.407 under the FCC Rules Part 15 Subpart E.

1.	Setup the EUT shown on 3.3.
2.	Turn on the power of all equipment.
3.	EUT run test program.

Measurement Software	
1	EZ-EMC Ver. ATL-03A1-1
2	EZ-EMC Ver ATL-ITC-3A1-1

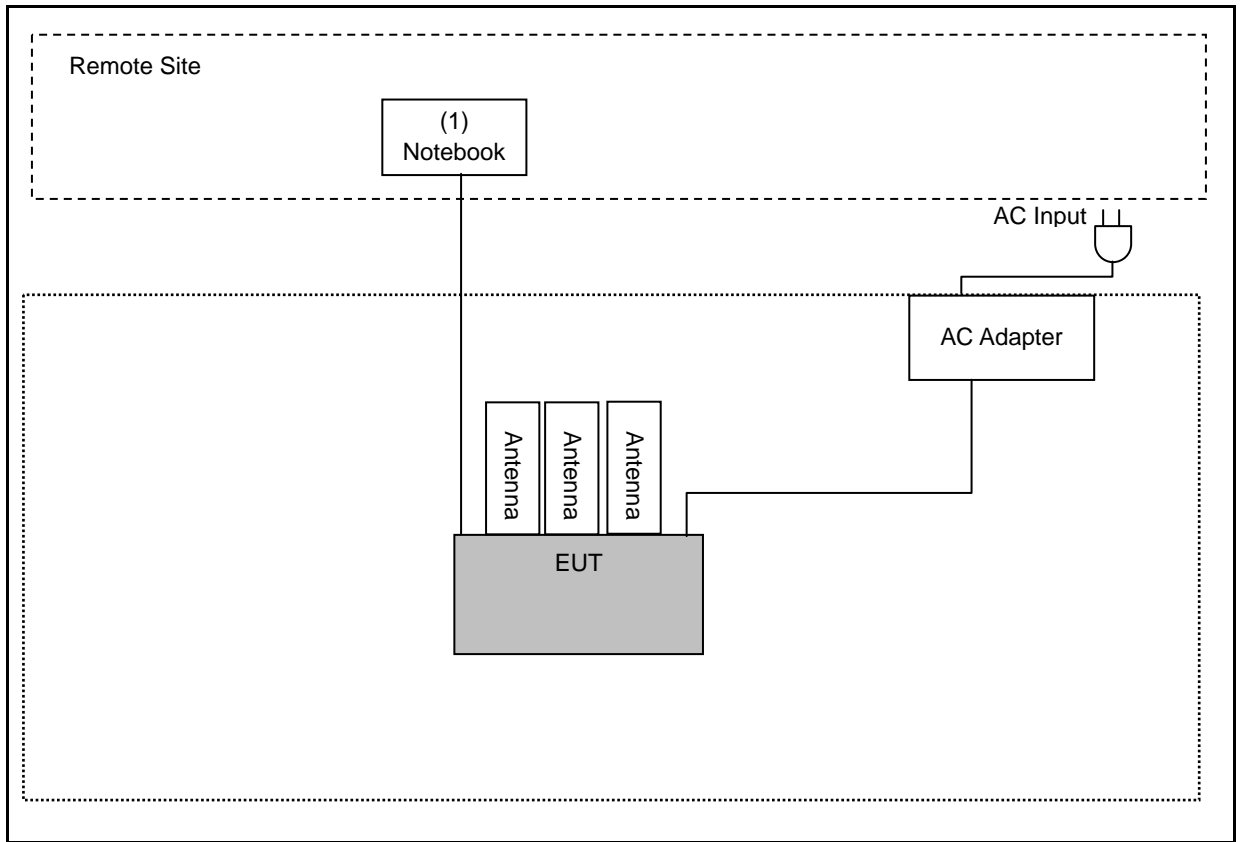
3.3. Configuration of Test System Details

Conducted Emissions



Devices Description					
	Product	Manufacturer	Model Number	Serial Number	Power Cord
(1)	PC	DELL	T3610	F5XBW02	Non-Shielded, 1.8m
(2)	PC	DELL	9020	HJMBW02	Non-Shielded, 1.8m
(3)	Notebook	DELL	LAPTITU	25627158361	Non-Shielded, 1.8m
(4)	AP	ASUS	MSQ-RTAC66U	D1IAGG000126	Non-Shielded, 1.8m
(5)	Notebook	DELL	LAPTITU	6699565657	Non-Shielded, 1.8m
(6)	HDD	WD	My Passport	WX71A8241990	Power by EUT
(7)	HDD	WD	My Passport	WXN1E32LVECU	Power by EUT

Radiated Emissions



Devices Description				
Product	Manufacturer	Model Number	Serial Number	Power Cord
(1) Notebook	DELL	LAPTITU	6699565657	Non-Shielded, 0.8m

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. AC Power Conducted Emission Measurement

■ Limit

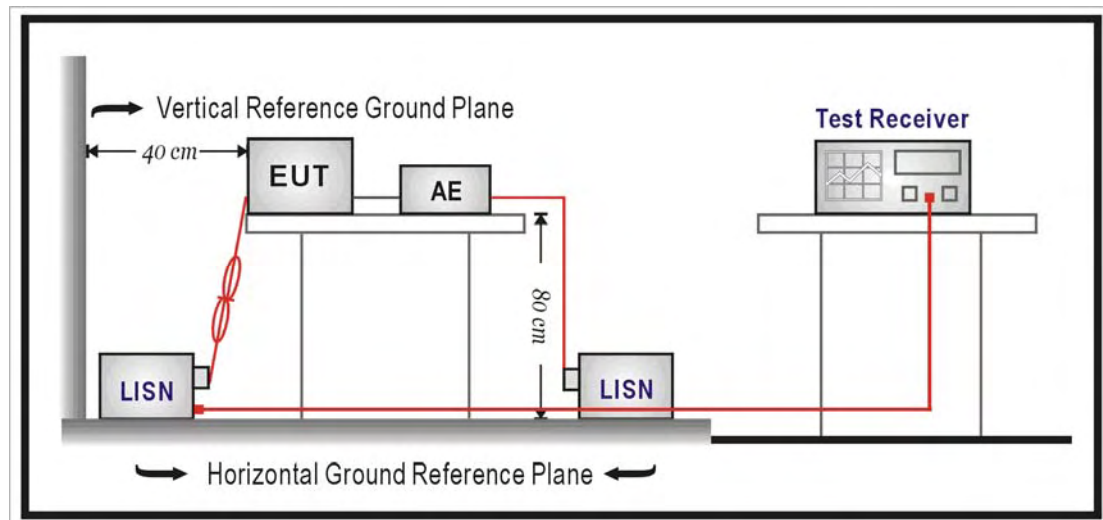
Frequency (MHz)	Quasi-peak	Average
0.15 - 0.5	66 to 56	56 to 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

■ Test Instruments

Describe	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Test Receiver	R&S	ESCI	100367	05/31/2016	1 year
LISN	R&S	ENV216	101040	03/15/2016	1 year
LISN	R&S	ENV216	101041	03/07/2016	1 year
RF Cable	Woken	00100D1380194M	TE-02-02	05/31/2016	1 year
Test Site	ATL	TE02	TE02	N.C.R.	-----

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

■ Test Setup



4.2. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a $50\Omega//50\mu\text{H}$ coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a $50\Omega//50\mu\text{H}$ coupling impedance with 50ohm termination.

Tabletop device shall be placed on a non-conducting platform, of nominal size 1 m by 1.5 m, raised 80 cm above the reference ground plane. The wall of screened room shall be located 40cm to the rear of the EUT. Other surfaces of tabletop or floor standing EUT shall be at least 80cm from any other ground conducting surface including one or more LISNs. For floor-standing device shall be placed under the EUT with a 12mm insulating material.

Conducted emissions were investigated over the frequency range from 0.15 MHz to 30 MHz using a resolution bandwidth of 9 kHz. The equipment under test (EUT) shall be meet the limits in section 4.1, as applicable, including the average limit and the quasi-peak limit when using respectively, an average detector and quasi-peak detector measured in accordance with the methods described of related standard. When all of peak value were complied with quasi-peak and average limit from 150kHz to 30MHz then quasi-peak and average measurement was unnecessary.

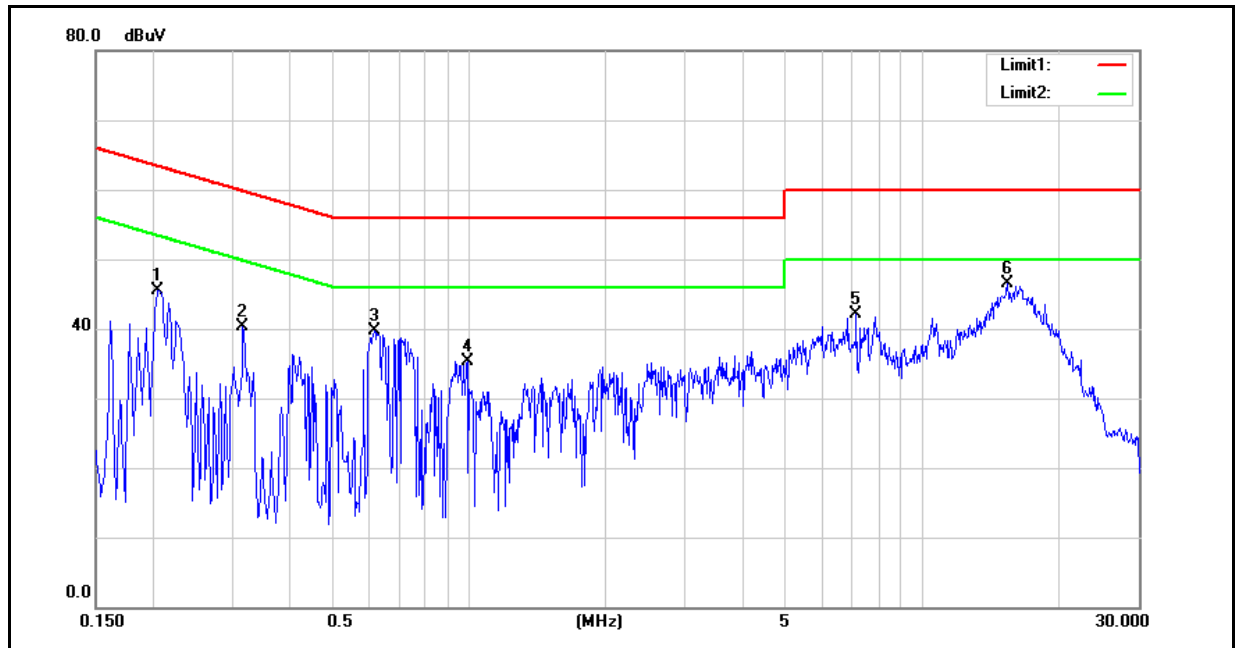
The AMN shall be placed 0,8 m from the boundary of the unit under test and bonded to a ground reference plane for AMNs mounted on top of the ground reference plane. This distance is between the closest points of the AMN and the EUT. All other units of the EUT and associated equipment shall be at least 0,8 m from the AMN. If the mains power cable is longer than 1m then the cable shall be folded back and forth at the centre of the lead to form a bundle no longer than 0.4m. All of interconnecting cables that hang closer than 40cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long. All of EUT and AE shall be separate place more than 0.1m. All 50 Ω ports of the LISN shall be resistively terminated into 50 Ω loads when not connected to the measuring instrument.

If the reading of the measuring receiver shows fluctuations close to the limit, the reading shall be observed for at least 15 s at each measurement frequency; the higher reading shall be recorded with the exception of any brief isolated high reading which shall be ignored.



■ Test Result

Standard:	FCC Part 15E	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 1	Date:	07/19/2016
		Test By:	Eric Ou Yang
Description:			



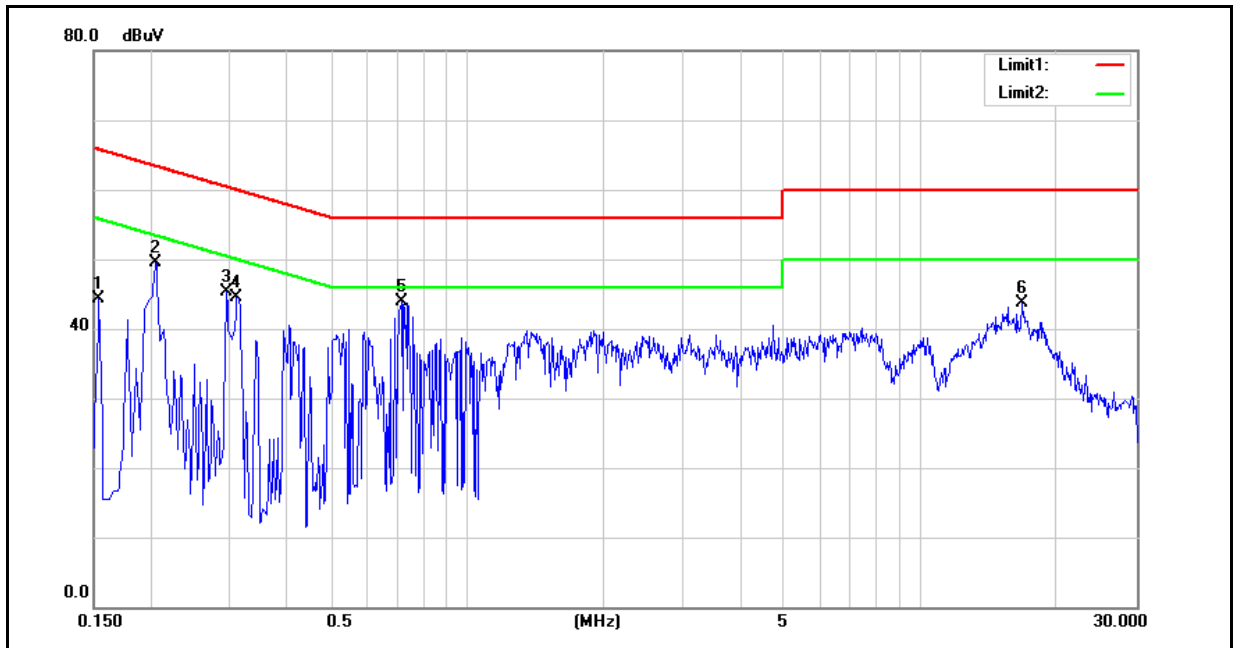
No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.2060	35.00	24.38	9.58	44.58	33.96	63.37	53.37	-18.79	-19.41	Pass
2	0.3180	22.17	15.36	9.59	31.76	24.95	59.76	49.76	-28.00	-24.81	Pass
3	0.6180	28.73	19.36	9.60	38.33	28.96	56.00	46.00	-17.67	-17.04	Pass
4	0.9940	22.25	6.29	9.63	31.88	15.92	56.00	46.00	-24.12	-30.08	Pass
5	7.1380	25.69	16.92	9.84	35.53	26.76	60.00	50.00	-24.47	-23.24	Pass
6	15.4140	30.92	24.33	10.02	40.94	34.35	60.00	50.00	-19.06	-15.65	Pass

Note: 1. Result = Correction factor + Reading

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



Standard:	FCC Part 15E	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 1	Date:	07/19/2016
		Test By:	Eric Ou Yang
Description:			



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	28.69	4.42	9.60	38.29	14.02	65.78	55.78	-27.49	-41.76	Pass
2	0.2060	39.85	28.95	9.59	49.44	38.54	63.37	53.37	-13.93	-14.83	Pass
3	0.2940	30.49	15.53	9.60	40.09	25.13	60.41	50.41	-20.32	-25.28	Pass
4	0.3100	31.64	21.32	9.60	41.24	30.92	59.97	49.97	-18.73	-19.05	Pass
5	0.7180	32.90	22.65	9.63	42.53	32.28	56.00	46.00	-13.47	-13.72	Pass
6	16.7660	26.51	21.88	9.94	36.45	31.82	60.00	50.00	-23.55	-18.18	Pass

Note: 1. Result = Correction factor + Reading

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

4.3. Transmitter Radiated Emissions Measurement

■ **Limit**

(1)Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(a)For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(d)For transmitters operating in the 5.725-5.85 GHz band:

(i)All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(2)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.

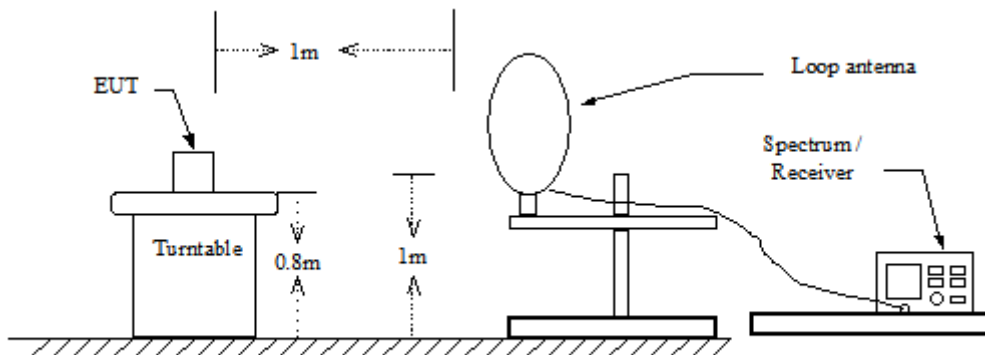
■ Test Instruments

3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
RF Pre-selector	Agilent	N9039A	MY46520256	01/08/2016	1 year
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/08/2016	1 year
Pre Amplifier	Agilent	8449B	3008A02237	10/07/2015	1 year
Pre Amplifier	Agilent	8447D	2944A11119	01/11/2016	1 year
Broadband Antenna	Schwarzbeck	VULB9168	416	09/25/2015	1 year
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	06/06/2016	1 year
Horn Antenna (18~40GHz)	ETS	3116	86467	09/01/2015	1 year
Loop Antenna	COM-POWER CORPORATION	AL-130	121014	02/01/2016	1 year
Microwave Cable	EMCI	EMC102-KM-KM-14000	151001	10/15/2015	1 year
Microwave Cable	EMCI	EMC-104-SM-SM-14000	140202	10/15/2015	1 year
Microwave Cable	EMCI	EMC104-SM-SM-600	140301	10/15/2015	1 year
Test Site	ATL	TE01	888001	08/27/2015	1 year

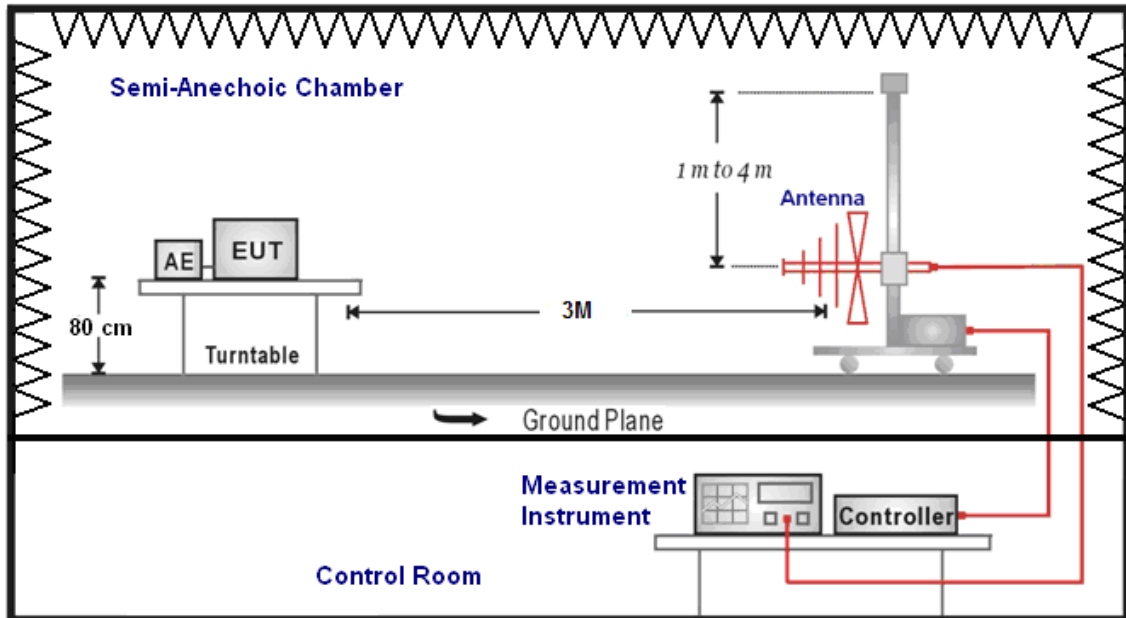
Note: N.C.R. = No Calibration Request.

■ Setup

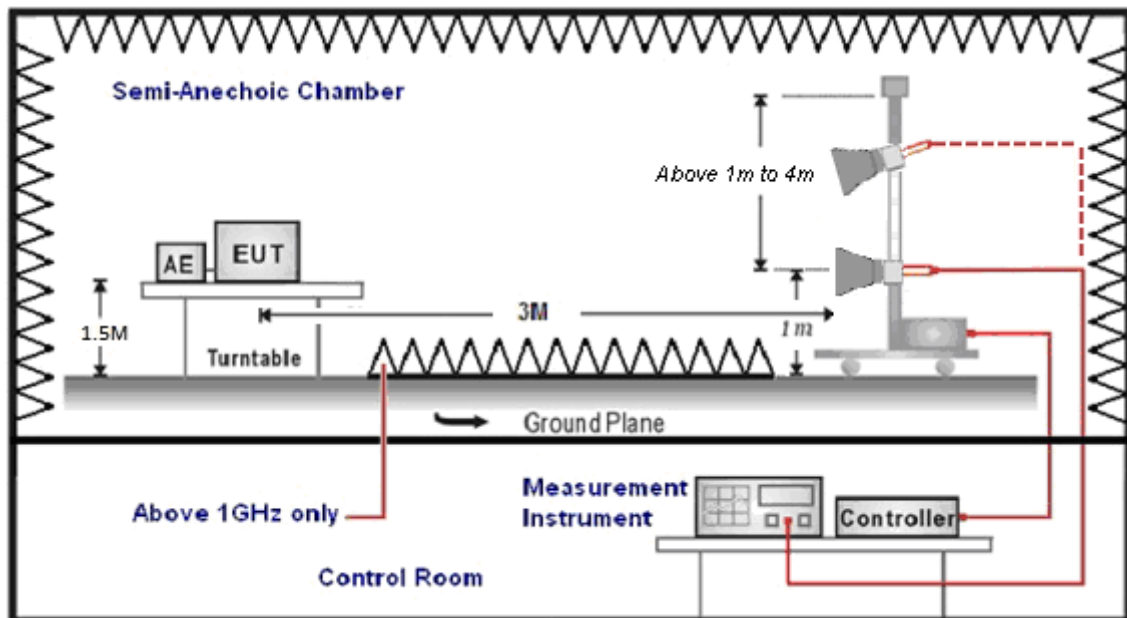
9kHz ~ 30MHz



30MHz ~ 1GHz



Above 1GHz



■ Test Procedure

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

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

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

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

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

SCHWARZBECK MESS-ELEKTRONIK Trilog-Broadband Antenna at 3 Meter and the ETS-Lindgren Double-Ridged Waveguide Horn antenna Schwarzbeck Mess-Elektronik Broadband Horn Antenna was used in frequencies 1 – 40 GHz at a distance of 3 meter. The antenna at an angle toward the source of the emission. All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20dB/decade).

For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

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

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

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

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



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

(1) $\text{Amplitude (dBuV/m)} = \text{FI (dBuV)} + \text{AF (dBuV)} + \text{CL (dBuV)} - \text{Gain (dB)}$

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

Measuring Instruments and setting

The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000MHz
Stop Frequency	40GHz
RBW/VBW(Emission in restricted band)	1MHz / 3MHz for Peak 1MHz / (1/T) for Average
RBW/VBW(Emission in non-restricted band)	1MHz / 3MHz for Peak



■ Test Result

Below 1GHz

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 1	Date:	07/06/2016
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
231.5000	32.09	-6.99	25.10	46.00	-20.90	QP	H
375.0000	26.54	-2.18	24.36	46.00	-21.64	QP	H
477.0000	24.30	0.32	24.62	46.00	-21.38	QP	H
607.0000	25.38	3.06	28.44	46.00	-17.56	QP	H
746.0000	24.91	5.92	30.83	46.00	-15.17	QP	H
907.0000	24.68	8.75	33.43	46.00	-12.57	QP	H
231.0000	32.05	-7.06	24.99	46.00	-21.01	QP	V
375.0000	25.16	-2.18	22.98	46.00	-23.02	QP	V
542.0000	25.76	1.34	27.10	46.00	-18.90	QP	V
650.0000	25.42	3.90	29.32	46.00	-16.68	QP	V
781.5000	24.68	6.43	31.11	46.00	-14.89	QP	V
915.0000	25.07	8.91	33.98	46.00	-12.02	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:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 2	Date:	07/06/2016				
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
10360.000	44.81	5.21	50.02	68.20	-18.18	peak	H
10360.000	45.51	5.21	50.72	68.20	-17.48	peak	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 2	Date:	07/06/2016				
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
10400.000	45.20	5.33	50.53	68.20	-17.67	peak	H
10400.000	47.01	5.33	52.34	68.20	-15.86	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:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 2	Date:	07/06/2016				
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
10480.000	45.61	5.55	51.16	68.20	-17.04	peak	H
10480.000	50.61	5.55	56.16	68.20	-12.04	peak	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 2	Date:	07/06/2016				
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
11490.000	46.60	6.44	53.04	74.00	-20.96	peak	H
11490.000	38.47	6.44	44.91	54.00	-9.09	AVG	H
11490.000	49.03	6.44	55.47	74.00	-18.53	peak	V
11490.000	40.21	6.44	46.65	54.00	-7.35	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:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 2	Date:	07/06/2016				
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
11570.000	49.66	6.63	56.29	74.00	-17.71	peak	H
11570.000	41.34	6.63	47.97	54.00	-6.03	AVG	H
11570.000	54.64	6.63	61.27	74.00	-12.73	peak	V
11570.000	46.46	6.63	53.09	54.00	-0.91	AVG	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 2	Date:	07/06/2016				
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
11650.000	45.17	6.85	52.02	74.00	-21.98	peak	H
11650.000	39.16	6.85	46.01	54.00	-7.99	AVG	H
11650.000	49.19	6.85	56.04	74.00	-17.96	peak	V
11650.000	41.48	6.85	48.33	54.00	-5.67	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:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 3	Date:	07/06/2016				
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
10360.000	43.92	5.21	49.13	68.20	-19.07	peak	H
10360.000	46.06	5.21	51.27	68.20	-16.93	peak	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 3	Date:	07/06/2016				
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
10400.000	45.59	5.33	50.92	68.20	-17.28	peak	H
10400.000	47.47	5.33	52.80	68.20	-15.40	peak	V

Note: 1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.



Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 3	Date:	07/06/2016				
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
10480.000	46.54	5.55	52.09	68.20	-16.11	peak	H
10480.000	48.20	5.55	53.75	68.20	-14.45	peak	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 3	Date:	07/06/2016				
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
11490.000	45.27	6.44	51.71	74.00	-22.29	peak	H
11490.000	48.25	6.44	54.69	74.00	-19.31	peak	V
11490.000	40.44	6.44	46.88	54.00	-7.12	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:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 3	Date:	07/06/2016				
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
11570.000	56.50	6.63	63.13	74.00	-10.87	peak	H
11570.000	46.20	6.63	52.83	54.00	-1.17	AVG	H
11570.000	56.50	6.63	63.13	74.00	-10.87	peak	V
11570.000	46.20	6.63	52.83	54.00	-1.17	AVG	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 3	Date:	07/06/2016				
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
11650.000	47.13	6.85	53.98	74.00	-20.02	peak	H
11650.000	39.70	6.85	46.55	54.00	-7.45	AVG	H
11650.000	50.49	6.85	57.34	74.00	-16.66	peak	V
11650.000	41.69	6.85	48.54	54.00	-5.46	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:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 4	Date:	07/06/2016				
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
10380.000	44.98	5.27	50.25	68.20	-17.95	peak	H
10380.000	46.04	5.27	51.31	68.20	-16.89	peak	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 4	Date:	07/06/2016				
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
10460.000	43.77	5.50	49.27	68.20	-18.93	peak	H
10460.000	46.02	5.50	51.52	68.20	-16.68	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:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 4	Date:	07/06/2016				
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
11510.000	46.25	6.47	52.72	74.00	-21.28	peak	H
11510.000	39.67	6.47	46.14	54.00	-7.86	AVG	H
11510.000	46.80	6.47	53.27	74.00	-20.73	peak	V
11510.000	41.74	6.47	48.21	54.00	-5.79	AVG	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 4	Date:	07/06/2016				
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
11590.000	45.71	6.69	52.40	74.00	-21.60	peak	H
11590.000	38.13	6.69	44.82	54.00	-9.18	AVG	H
11590.000	45.32	6.69	52.01	74.00	-21.99	peak	V
11590.000	40.40	6.69	47.09	54.00	-6.91	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:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 5	Date:	07/06/2016				
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
10420.000	43.25	5.37	48.62	68.20	-19.58	peak	H
10420.000	45.34	5.37	50.71	68.20	-17.49	peak	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 5	Date:	07/06/2016				
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
11550.000	45.17	6.58	51.75	74.00	-22.25	peak	H
11550.000	45.33	6.58	51.91	74.00	-22.09	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:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Simultaneous Transmitting (DTS+NII)	Date:	07/06/2016
		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
2802.000	52.38	-13.47	38.91	74.00	-35.09	peak	H
4281.000	47.70	-9.32	38.38	74.00	-35.62	peak	H
7545.000	47.01	0.23	47.24	74.00	-26.76	peak	H
2802.000	51.82	-13.47	38.35	74.00	-35.65	peak	V
4281.000	48.06	-9.32	38.74	74.00	-35.26	peak	V
7562.000	46.94	0.26	47.20	74.00	-26.80	peak	V



Band Edge

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 2	Date:	07/05/2016
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
4884.300	50.29	7.72	58.01	74.00	-15.99	peak	H
4884.300	36.83	7.72	44.55	54.00	-9.45	AVG	H
5150.000	47.65	8.29	55.94	74.00	-18.06	peak	H
5146.800	57.61	8.28	65.89	74.00	-8.11	peak	V
5146.800	43.05	8.28	51.33	54.00	-2.67	AVG	V
5150.000	60.03	8.29	68.32	74.00	-5.68	peak	V
5150.000	45.45	8.29	53.74	54.00	-0.26	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:		Radiated Emission		Power:		AC 120V/60Hz	
Model Number:		Archer C7		Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Test Mode:		Mode 2		Date:		07/05/2016	
Frequency:		5200 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
4608.480	51.08	6.75	57.83	74.00	-16.17	peak	H
4608.480	37.54	6.75	44.29	54.00	-9.71	AVG	H
5150.000	45.86	8.29	54.15	74.00	-19.85	peak	H
5150.000	35.88	8.29	44.17	54.00	-9.83	AVG	H
5350.000	47.43	8.50	55.93	74.00	-18.07	peak	H
5350.000	35.70	8.50	44.20	54.00	-9.80	AVG	H
5407.200	48.64	8.56	57.20	74.00	-16.80	peak	H
5407.200	35.77	8.56	44.33	54.00	-9.67	AVG	H
5143.200	56.90	8.28	65.18	74.00	-8.82	peak	V
5143.200	36.37	8.28	44.65	54.00	-9.35	AVG	V
5150.000	63.78	8.29	72.07	74.00	-1.93	peak	V
5150.000	45.42	8.29	53.71	54.00	-0.29	AVG	V
5350.000	49.96	8.50	58.46	74.00	-15.54	peak	V
5350.000	35.88	8.50	44.38	54.00	-9.62	AVG	V
5361.120	51.42	8.52	59.94	74.00	-14.06	peak	V
5361.120	35.77	8.52	44.29	54.00	-9.71	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: Radiated Emission		Power: AC 120V/60Hz					
Model Number: Archer C7		Temp.(°C)/Hum.(%RH): 26(°C)/60%RH					
Test Mode: Mode 2		Date: 07/05/2016					
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
4632.480	50.84	6.83	57.67	74.00	-16.33	peak	H
4632.480	37.29	6.83	44.12	54.00	-9.88	AVG	H
5150.000	45.84	8.29	54.13	74.00	-19.87	peak	H
5150.000	35.90	8.29	44.19	54.00	-9.81	AVG	H
5350.000	47.48	8.50	55.98	74.00	-18.02	peak	H
5350.000	36.43	8.50	44.93	54.00	-9.07	AVG	H
5410.080	48.18	8.57	56.75	74.00	-17.25	peak	H
5410.080	35.70	8.57	44.27	54.00	-9.73	AVG	H
5145.120	59.60	8.28	67.88	74.00	-6.12	peak	V
5145.120	42.89	8.28	51.17	54.00	-2.83	AVG	V
5150.000	57.15	8.29	65.44	74.00	-8.56	peak	V
5150.000	45.53	8.29	53.82	54.00	-0.18	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:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 2	Date:	07/05/2016
Frequency:	5745 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
5650.000	46.92	9.01	55.93	68.20	-12.27	peak	H
5700.000	52.46	9.13	61.59	105.20	-43.61	peak	H
5720.000	70.09	9.17	79.26	110.80	-31.54	peak	H
5725.000	77.76	9.19	86.95	122.20	-35.25	peak	H
5616.650	58.26	8.93	67.19	68.20	-1.01	peak	V
5641.850	58.89	8.99	67.88	68.20	-0.32	peak	V
5649.650	58.57	9.01	67.58	68.20	-0.62	peak	V
5651.750	59.58	9.01	68.59	69.50	-0.91	peak	V
5661.050	65.52	9.04	74.56	76.38	-1.82	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: Archer C7		Temp.(°C)/Hum.(%RH): 26(°C)/60%RH					
Test Mode: Mode 2		Date: 07/05/2016					
Frequency: 5785 MHz		Test By: Eric Ou Yang					
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
5650.000	46.40	9.01	55.41	68.20	-12.79	peak	H
5700.000	47.52	9.13	56.65	105.20	-48.55	peak	H
5720.000	52.95	9.17	62.12	110.80	-48.68	peak	H
5725.000	56.49	9.19	65.68	122.20	-56.52	peak	H
5850.000	53.19	9.46	62.65	122.20	-59.55	peak	H
5855.000	47.80	9.48	57.28	110.80	-53.52	peak	H
5875.000	46.01	9.53	55.54	105.20	-49.66	peak	H
5925.000	46.16	9.65	55.81	68.20	-12.39	peak	H
5637.200	58.86	8.98	67.84	68.20	-0.36	peak	V
5661.600	62.54	9.04	71.58	76.78	-5.20	peak	V
5920.800	60.33	9.63	69.96	71.31	-1.35	peak	V
5935.600	57.65	9.67	67.32	68.20	-0.88	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:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 2	Date:	07/05/2016
Frequency:	5825 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
5850.000	63.42	9.46	72.88	122.20	-49.32	peak	H
5855.000	59.67	9.48	69.15	110.80	-41.65	peak	H
5875.000	49.14	9.53	58.67	105.20	-46.53	peak	H
5925.000	46.50	9.65	56.15	68.20	-12.05	peak	H
5914.320	65.17	9.62	74.79	76.10	-1.31	peak	V
5922.240	60.12	9.63	69.75	70.24	-0.49	peak	V
5923.320	59.05	9.64	68.69	69.44	-0.75	peak	V
5925.300	58.34	9.65	67.99	68.20	-0.21	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:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 3	Date:	07/05/2016
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
4830.400	49.60	7.53	57.13	74.00	-16.87	peak	H
4830.400	36.84	7.53	44.37	54.00	-9.63	AVG	H
5150.000	45.52	8.29	53.81	74.00	-20.19	peak	H
5150.000	36.35	8.29	44.64	54.00	-9.36	AVG	H
5148.200	62.70	8.29	70.99	74.00	-3.01	peak	V
5148.200	42.82	8.29	51.11	54.00	-2.89	AVG	V
5150.000	60.91	8.29	69.20	74.00	-4.80	peak	V
5150.000	45.41	8.29	53.70	54.00	-0.30	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: Radiated Emission		Power: AC 120V/60Hz					
Model Number: Archer C7		Temp.(°C)/Hum.(%RH): 26(°C)/60%RH					
Test Mode: Mode 3		Date: 07/05/2016					
Frequency: 5200 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
4785.120	50.46	7.37	57.83	74.00	-16.17	peak	H
4785.120	36.89	7.37	44.26	54.00	-9.74	AVG	H
5150.000	47.18	8.29	55.47	74.00	-18.53	peak	H
5150.000	36.17	8.29	44.46	54.00	-9.54	AVG	H
5350.000	46.81	8.50	55.31	74.00	-18.69	peak	H
5350.000	36.07	8.50	44.57	54.00	-9.43	AVG	H
5362.080	48.56	8.52	57.08	74.00	-16.92	peak	H
5362.080	36.17	8.52	44.69	54.00	-9.31	AVG	H
5147.040	56.74	8.28	65.02	74.00	-8.98	peak	V
5147.040	42.89	8.28	51.17	54.00	-2.83	AVG	V
5150.000	60.74	8.29	69.03	74.00	-4.97	peak	V
5150.000	45.33	8.29	53.62	54.00	-0.38	AVG	V
5350.000	49.85	8.50	58.35	74.00	-15.65	peak	V
5350.000	40.52	8.50	49.02	54.00	-4.98	AVG	V
5395.680	50.60	8.55	59.15	74.00	-14.85	peak	V
5395.680	39.58	8.55	48.13	54.00	-5.87	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: Radiated Emission		Power: AC 120V/60Hz					
Model Number: Archer C7		Temp.(°C)/Hum.(%RH): 26(°C)/60%RH					
Test Mode: Mode 3		Date: 07/05/2016					
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
4651.680	50.74	6.89	57.63	74.00	-16.37	peak	H
4651.680	37.42	6.89	44.31	54.00	-9.69	AVG	H
5150.000	45.64	8.29	53.93	74.00	-20.07	peak	H
5150.000	36.28	8.29	44.57	54.00	-9.43	AVG	H
5350.000	46.44	8.50	54.94	74.00	-19.06	peak	H
5350.000	35.84	8.50	44.34	54.00	-9.66	AVG	H
5372.640	48.04	8.52	56.56	74.00	-17.44	peak	H
5372.640	35.99	8.52	44.51	54.00	-9.49	AVG	H
5145.120	53.73	8.28	62.01	74.00	-11.99	peak	V
5145.120	43.01	8.28	51.29	54.00	-2.71	AVG	V
5150.000	52.18	8.29	60.47	74.00	-13.53	peak	V
5150.000	45.36	8.29	53.65	54.00	-0.35	AVG	V
5350.000	50.08	8.50	58.58	74.00	-15.42	peak	V
5350.000	42.89	8.50	51.39	54.00	-2.61	AVG	V
5357.280	53.06	8.51	61.57	74.00	-12.43	peak	V
5357.280	42.54	8.51	51.05	54.00	-2.95	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: Radiated Emission		Power: AC 120V/60Hz					
Model Number: Archer C7		Temp.(°C)/Hum.(%RH): 26(°C)/60%RH					
Test Mode: Mode 3		Date: 07/05/2016					
Frequency: 5745 MHz		Test By: Eric Ou Yang					
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
5650.000	46.45	9.01	55.46	68.20	-12.74	peak	H
5700.000	52.29	9.13	61.42	105.20	-43.78	peak	H
5720.000	70.16	9.17	79.33	110.80	-31.47	peak	H
5725.000	73.82	9.19	83.01	122.20	-39.19	peak	H
5617.550	58.96	8.93	67.89	68.20	-0.31	peak	V
5648.300	57.55	9.00	66.55	68.20	-1.65	peak	V
5649.950	57.95	9.01	66.96	68.20	-1.24	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: Archer C7		Temp.(°C)/Hum.(%RH): 26(°C)/60%RH					
Test Mode: Mode 3		Date: 07/05/2016					
Frequency: 5785 MHz		Test By: Eric Ou Yang					
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
5650.000	48.06	9.01	57.07	68.20	-11.13	peak	H
5700.000	51.03	9.13	60.16	105.20	-45.04	peak	H
5720.000	54.31	9.17	63.48	110.80	-47.32	peak	H
5725.000	53.94	9.19	63.13	122.20	-59.07	peak	H
5850.000	52.28	9.46	61.74	122.20	-60.46	peak	H
5855.000	50.30	9.48	59.78	110.80	-51.02	peak	H
5875.000	47.41	9.53	56.94	105.20	-48.26	peak	H
5925.000	46.88	9.65	56.53	68.20	-11.67	peak	H
5644.000	58.09	8.99	67.08	68.20	-1.12	peak	V
5922.400	60.05	9.63	69.68	70.12	-0.44	peak	V
5933.600	57.78	9.66	67.44	68.20	-0.76	peak	V
5939.200	56.56	9.67	66.23	68.20	-1.97	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: Archer C7		Temp.(°C)/Hum.(%RH): 26(°C)/60%RH					
Test Mode: Mode 3		Date: 07/05/2016					
Frequency: 5825 MHz		Test By: Eric Ou Yang					
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
5850.000	70.86	9.46	80.32	122.20	-41.88	peak	H
5855.000	65.20	9.48	74.68	110.80	-36.12	peak	H
5875.000	52.16	9.53	61.69	105.20	-43.51	peak	H
5925.000	46.48	9.65	56.13	68.20	-12.07	peak	H
5913.600	66.39	9.62	76.01	76.64	-0.63	peak	V
5915.760	64.95	9.62	74.57	75.04	-0.47	peak	V
5923.320	59.35	9.64	68.99	69.44	-0.45	peak	V
5924.940	58.20	9.64	67.84	68.24	-0.40	peak	V
5937.540	58.34	9.67	68.01	68.20	-0.19	peak	V
5939.340	57.95	9.68	67.63	68.20	-0.57	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: Archer C7		Temp.(°C)/Hum.(%RH): 26(°C)/60%RH					
Test Mode: Mode 4		Date: 07/05/2016					
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
4802.400	50.18	7.43	57.61	74.00	-16.39	peak	H
4802.400	37.16	7.43	44.59	54.00	-9.41	AVG	H
5150.000	46.58	8.29	54.87	74.00	-19.13	peak	H
5150.000	36.43	8.29	44.72	54.00	-9.28	AVG	H
5148.200	61.42	8.29	69.71	74.00	-4.29	peak	V
5148.200	43.22	8.29	51.51	54.00	-2.49	AVG	V
5150.000	59.54	8.29	67.83	74.00	-6.17	peak	V
5150.000	45.40	8.29	53.69	54.00	-0.31	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: Radiated Emission		Power: AC 120V/60Hz					
Model Number: Archer C7		Temp.(°C)/Hum.(%RH): 26(°C)/60%RH					
Test Mode: Mode 4		Date: 07/05/2016					
Frequency: 5230 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
4718.880	50.41	7.14	57.55	74.00	-16.45	peak	H
4718.880	37.79	7.14	44.93	54.00	-9.07	AVG	H
5150.000	46.40	8.29	54.69	74.00	-19.31	peak	H
5150.000	36.76	8.29	45.05	54.00	-8.95	AVG	H
5350.000	47.09	8.50	55.59	74.00	-18.41	peak	H
5350.000	35.83	8.50	44.33	54.00	-9.67	AVG	H
5380.320	48.96	8.54	57.50	74.00	-16.50	peak	H
5380.320	35.93	8.54	44.47	54.00	-9.53	AVG	H
5147.040	63.57	8.28	71.85	74.00	-2.15	peak	V
5147.040	43.03	8.28	51.31	54.00	-2.69	AVG	V
5150.000	59.90	8.29	68.19	74.00	-5.81	peak	V
5150.000	45.43	8.29	53.72	54.00	-0.28	AVG	V
5350.000	53.58	8.50	62.08	74.00	-11.92	peak	V
5350.000	39.44	8.50	47.94	54.00	-6.06	AVG	V
5354.400	54.30	8.51	62.81	74.00	-11.19	peak	V
5354.400	38.64	8.51	47.15	54.00	-6.85	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:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	Archer C7	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 4	Date:	07/05/2016
Frequency:	5755 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
5650.000	46.19	9.01	55.20	68.20	-13.00	peak	H
5700.000	55.42	9.13	64.55	105.20	-40.65	peak	H
5720.000	66.70	9.17	75.87	110.80	-34.93	peak	H
5725.000	69.60	9.19	78.79	122.20	-43.41	peak	H
5641.440	58.14	8.99	67.13	68.20	-1.07	peak	V
5647.040	57.88	9.00	66.88	68.20	-1.32	peak	V
5648.320	59.10	9.00	68.10	68.20	-0.10	peak	V
5658.880	64.49	9.02	73.51	74.77	-1.26	peak	V
5659.360	65.15	9.02	74.17	75.13	-0.96	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: Archer C7		Temp.(°C)/Hum.(%RH): 26(°C)/60%RH					
Test Mode: Mode 4		Date: 07/05/2016					
Frequency: 5795 MHz		Test By: Eric Ou Yang					
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
5850.000	59.71	9.46	69.17	122.20	-53.03	peak	H
5855.000	52.98	9.48	62.46	110.80	-48.34	peak	H
5875.000	50.46	9.53	59.99	105.20	-45.21	peak	H
5925.000	47.48	9.65	57.13	68.20	-11.07	peak	H
5922.720	59.85	9.64	69.49	69.89	-0.40	peak	V
5924.190	58.69	9.64	68.33	68.80	-0.47	peak	V
5927.130	58.12	9.65	67.77	68.20	-0.43	peak	V
5938.890	57.47	9.67	67.14	68.20	-1.06	peak	V
5942.040	57.08	9.68	66.76	68.20	-1.44	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: Archer C7		Temp.(°C)/Hum.(%RH): 26(°C)/60%RH					
Test Mode: Mode 5		Date: 07/05/2016					
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
4624.800	51.66	6.80	58.46	74.00	-15.54	peak	H
4624.800	36.29	6.80	43.09	54.00	-10.91	AVG	H
5150.000	46.59	8.29	54.88	74.00	-19.12	peak	H
5150.000	36.06	8.29	44.35	54.00	-9.65	AVG	H
5350.000	48.24	8.50	56.74	74.00	-17.26	peak	H
5350.000	35.47	8.50	43.97	54.00	-10.03	AVG	H
5412.960	49.51	8.57	58.08	74.00	-15.92	peak	H
5412.960	35.63	8.57	44.20	54.00	-9.80	AVG	H
5146.080	61.95	8.28	70.23	74.00	-3.77	peak	V
5146.080	43.88	8.28	52.16	54.00	-1.84	AVG	V
5150.000	61.77	8.29	70.06	74.00	-3.94	peak	V
5150.000	45.42	8.29	53.71	54.00	-0.29	AVG	V
5350.000	48.76	8.50	57.26	74.00	-16.74	peak	V
5350.000	37.84	8.50	46.34	54.00	-7.66	AVG	V
5422.560	50.51	8.58	59.09	74.00	-14.91	peak	V
5422.560	37.92	8.58	46.50	54.00	-7.50	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: Radiated Emission		Power: AC 120V/60Hz					
Model Number: Archer C7		Temp.(°C)/Hum.(%RH): 26(°C)/60%RH					
Test Mode: Mode 5		Date: 07/05/2016					
Frequency: 5775 MHz		Test By: Eric Ou Yang					
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
5650.000	47.43	9.01	56.44	68.20	-11.76	peak	H
5700.000	52.55	9.13	61.68	105.20	-43.52	peak	H
5720.000	56.12	9.17	65.29	110.80	-45.51	peak	H
5725.000	57.09	9.19	66.28	122.20	-55.92	peak	H
5850.000	48.49	9.46	57.95	122.20	-64.25	peak	H
5855.000	46.23	9.48	55.71	110.80	-55.09	peak	H
5875.000	46.53	9.53	56.06	105.20	-49.14	peak	H
5925.000	46.30	9.65	55.95	68.20	-12.25	peak	H
5645.200	57.54	8.99	66.53	68.20	-1.67	peak	V
5646.000	58.74	8.99	67.73	68.20	-0.47	peak	V
5648.000	58.69	9.00	67.69	68.20	-0.51	peak	V
5850.000	64.82	9.46	74.28	122.20	-47.92	peak	V
5855.000	61.63	9.48	71.11	110.80	-39.69	peak	V
5875.000	58.04	9.53	67.57	105.20	-37.63	peak	V
5925.000	52.89	9.65	62.54	68.20	-5.66	peak	V

Note: 1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

4.4. Maximum Conducted Output Power and Transmit power control Measurement

■ **Limit**

Frequency Range (MHz)	FCC Maximum Conducted Output Power Limit
5.150 ~ 5.250 GHz	The lesser of 1W (30dBm)
5.725 ~ 5.850 GHz	The lesser of 1W (30dBm)

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.

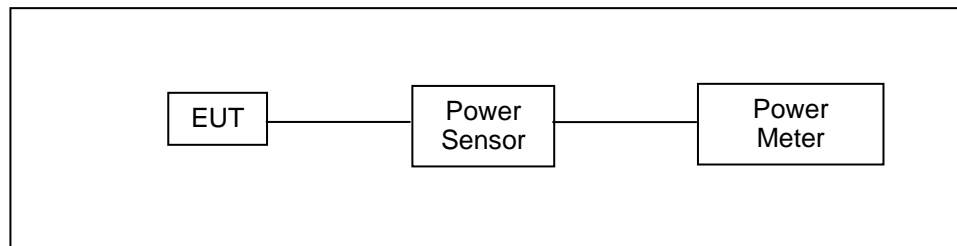
According FCC KDB 662911 D01 v02r01 – for power measurements on IEEE802.11 devices,

Directional gain = $10 \cdot \log\{[10^{(G1/10)} + 10^{(G2/10)} + \dots + 10^{(Gn/10)}] / NANT\}$ dBi

* CDD mode : Directional Gain = $10 \cdot \log\{[10^{(G1/10)} + 10^{(G2/10)} + \dots + 10^{(Gn/10)}] / NANT\} = 5 \text{ dBi} < 6 \text{ dBi}$

CDD mode power limit shall be reduced = 30 dBm

■ **Test Setup**



■ **Test Instruments**

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Power Sensor	Anritsu	MA2411B	1126022	08/24/2015	1 year
Power Meter	Anritsu	ML2495A	1135009	08/24/2015	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 v01r02, Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices

Section (E) Maximum Conducted Output Power

3. Measurement using a Power Meter (PM)

b) Method PM-G (Measurement using a gated RF average power meter)



■ Test Result

Model Number		Archer C7						
Test Item		Maximum Conducted Output Power						
Test Mode		Mode 2: IEEE 802.11a Link Mode						
Date of Test		07/05/2016						
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		FCC Limit (dBm)
		Max. Outup Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5180	6M	17.57	0.057	18.04	0.064	18.35	0.068	≤ 30
5200		19.30	0.085	19.53	0.090	20.25	0.106	
5220		19.27	0.085	19.41	0.087	19.84	0.096	
5240		19.32	0.086	19.38	0.087	19.77	0.095	≤ 30
5745		20.52	0.113	20.28	0.107	20.70	0.117	
5765		20.61	0.115	20.37	0.109	20.83	0.121	
5785		20.12	0.103	20.22	0.105	20.52	0.113	
5805		20.09	0.102	20.22	0.105	20.84	0.121	
5825		20.27	0.106	20.21	0.105	20.73	0.118	

Model Number		Archer C7					
Test Item		Maximum Conducted Output Power					
Test Mode		Mode 2: IEEE 802.11a Link Mode					
Date of Test		07/05/2016					
Frequency (MHz)	Data Rate	ANT-0+1+2				FCC Limit (dBm)	
		Max. Outup Power					
		(dBm)		(W)			
5180	6M	22.77		0.189		≤ 30	
5200		24.48		0.281			
5220		24.28		0.268			
5240		24.27		0.267		≤ 30	
5745		25.27		0.337			
5765		25.38		0.345			
5785		25.06		0.321			
5805		25.17		0.329			
5825		25.18		0.330			

Note: Evaluated high and low data rate, the report record worst case low data rate measurement results.



Model Number		Archer C7						
Test Item		Maximum Conducted Output Power						
Test Mode		Mode 3: IEEE 802.11ac 20MHz Link Mode						
Date of Test		07/05/2016						
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		FCC Limit (dBm)
		Max. Outup Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5180	19.5M	17.22	0.053	18.03	0.064	18.20	0.066	≤ 30
5200		19.95	0.099	19.33	0.086	19.19	0.083	
5220		19.31	0.085	19.16	0.082	19.75	0.094	
5240		19.15	0.082	19.24	0.084	19.91	0.098	
5745		20.55	0.114	20.42	0.110	20.82	0.121	≤ 30
5765		20.44	0.111	20.24	0.106	20.76	0.119	
5785		20.23	0.105	20.18	0.104	20.32	0.108	
5805		20.26	0.106	20.02	0.100	20.57	0.114	
5825		19.84	0.096	20.34	0.108	20.67	0.117	

Model Number		Archer C7					
Test Item		Maximum Conducted Output Power					
Test Mode		Mode 3: IEEE 802.11ac 20MHz Link Mode					
Date of Test		07/05/2016					
Frequency (MHz)	Data Rate	ANT-0+1+2				FCC Limit (dBm)	
		Max. Outup Power					
		(dBm)	(W)				
5180	19.5M	22.61	0.182	≤ 30			
5200		24.27	0.268				
5220		24.19	0.262				
5240		24.22	0.264				
5745		25.37	0.344	≤ 30			
5765		25.26	0.335				
5785		25.01	0.317				
5805		25.06	0.321				
5825		25.07	0.321				

Note: Evaluated high and low data rate, the report record worst case low data rate measurement results.



Model Number		Archer C7						
Test Item		Maximum Conducted Output Power						
Test Mode		Mode 4: IEEE 802.11ac 40MHz Link Mode						
Date of Test		07/05/2016						
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		FCC Limit (dBm)
		Max. Outup Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5190	40.5M	12.58	0.018	13.04	0.020	12.72	0.019	≤ 30
5230		19.48	0.089	19.30	0.085	19.97	0.099	
5755		20.66	0.116	20.46	0.111	20.50	0.112	≤ 30
5795		21.00	0.126	20.70	0.117	21.18	0.131	

Model Number		Archer C7					
Test Item		Maximum Conducted Output Power					
Test Mode		Mode 4: IEEE 802.11ac 40MHz Link Mode					
Date of Test		07/05/2016					
Frequency (MHz)	Data Rate	ANT-0+1+2				FCC Limit (dBm)	
		Max. Outup Power					
		(dBm)		(W)			
5190	40.5M	17.56		0.057		≤ 30	
5230		24.36		0.273			
5755		25.31		0.340		≤ 30	
5795		25.74		0.375			

Note: Evaluated high and low data rate, the report record worst case low data rate measurement results.



Model Number		Archer C7						
Test Item		Maximum Conducted Output Power						
Test Mode		Mode 5: IEEE 802.11ac 80MHz Link Mode						
Date of Test		07/05/2016						
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		FCC Limit (dBm)
		Max. Outup Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5210	87.9M	10.00	0.010	10.38	0.011	10.20	0.010	≤ 30
5775		16.94	0.049	17.01	0.050	16.46	0.044	≤ 30

Model Number		Archer C7						
Test Item		Maximum Conducted Output Power						
Test Mode		Mode 5: IEEE 802.11ac 80MHz Link Mode						
Date of Test		07/05/2016						
Frequency (MHz)	Data Rate	ANT-0+1+2						FCC Limit (dBm)
		Max. Outup Power						
		(dBm)			(W)			
5210	87.9M	14.97			0.031			≤ 30
5775		21.58			0.144			≤ 30

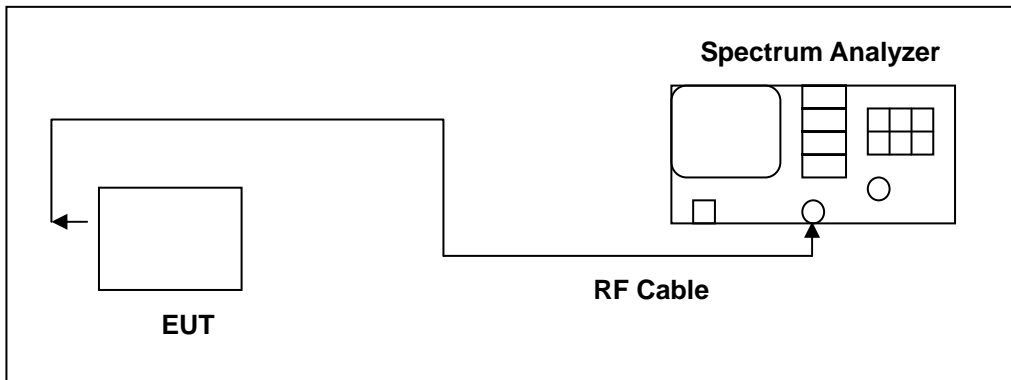
Note: Evaluated high and low data rate, the report record worst case low data rate measurement results.

4.5. 26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement

■ **Limit**

N/A

■ **Test Setup**



■ **Test Instruments**

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/15/2015	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 v01r02, Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	>26dB Bandwidth
RBW	Approximately 1% of the emission bandwidth
VBW	VBW > RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto



■ Test Result

Model Number	Archer C7					
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement					
Test Mode	Mode 2: IEEE 802.11a Link Mode					
Date of Test	07/06/2016					
Frequency (MHz)	ANT-0		ANT-1		ANT-2	
	26dB Bandwidth (MHz)	99 % Occupied Bandwidth	26dB Bandwidth (MHz)	99 % Occupied Bandwidth	26dB Bandwidth (MHz)	99 % Occupied Bandwidth
5180	22.030	16.713	22.860	16.757	21.660	16.639
5200	24.250	16.800	24.840	16.833	23.040	16.689
5240	23.630	16.767	25.000	16.875	22.210	16.714

Model Number	Archer C7					
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement					
Test Mode	Mode 3: IEEE 802.11ac 20MHz Link Mode					
Date of Test	07/06/2016					
Frequency (MHz)	ANT-0		ANT-1		ANT-2	
	26dB Bandwidth (MHz)	99 % Occupied Bandwidth	26dB Bandwidth (MHz)	99 % Occupied Bandwidth	26dB Bandwidth (MHz)	99 % Occupied Bandwidth
5180	23.370	17.878	24.500	17.859	23.120	17.830
5200	24.420	17.881	25.000	17.961	24.400	17.839
5240	24.490	17.900	25.000	17.982	23.750	17.834

Model Number	Archer C7					
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement					
Test Mode	Mode 4: IEEE 802.11ac 40MHz Link Mode					
Date of Test	07/06/2016					
Frequency (MHz)	ANT-0		ANT-1		ANT-2	
	26dB Bandwidth (MHz)	99 % Occupied Bandwidth	26dB Bandwidth (MHz)	99 % Occupied Bandwidth	26dB Bandwidth (MHz)	99 % Occupied Bandwidth
5190	46.410	36.900	45.430	36.902	43.880	36.760
5230	47.460	36.939	49.980	37.037	47.840	36.717

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



Model Number	Archer C7					
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement					
Test Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode					
Date of Test	07/06/2016					
Frequency (MHz)	ANT-0		ANT-1		ANT-2	
	26dB Bandwidth (MHz)	99 % Occupied Bandwidth	26dB Bandwidth (MHz)	99 % Occupied Bandwidth	26dB Bandwidth (MHz)	99 % Occupied Bandwidth
5210	85.880	75.708	86.740	75.892	86.440	75.696

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



■ Test Graphs

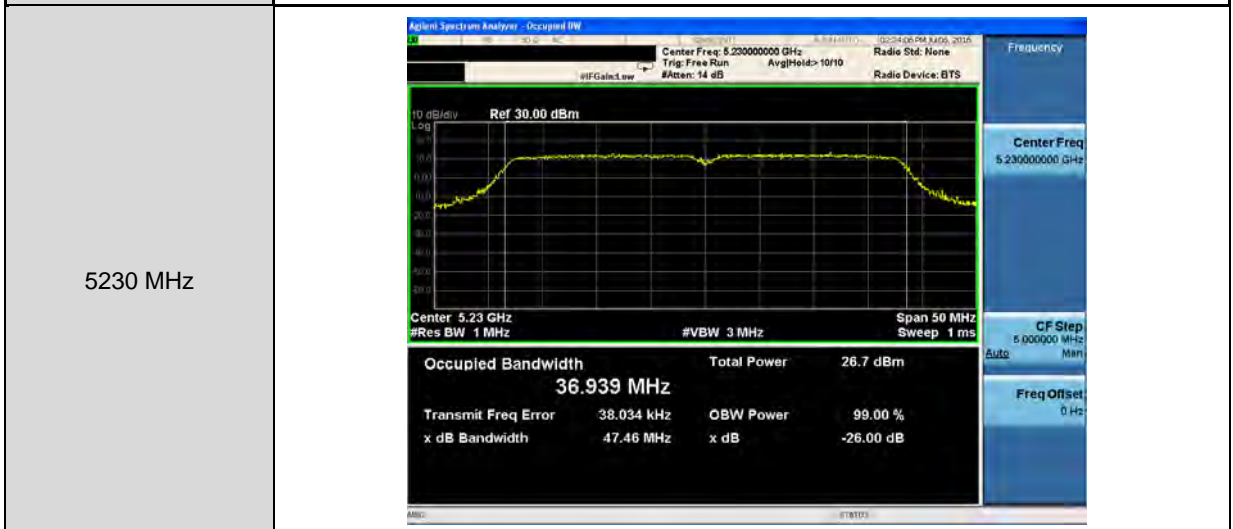
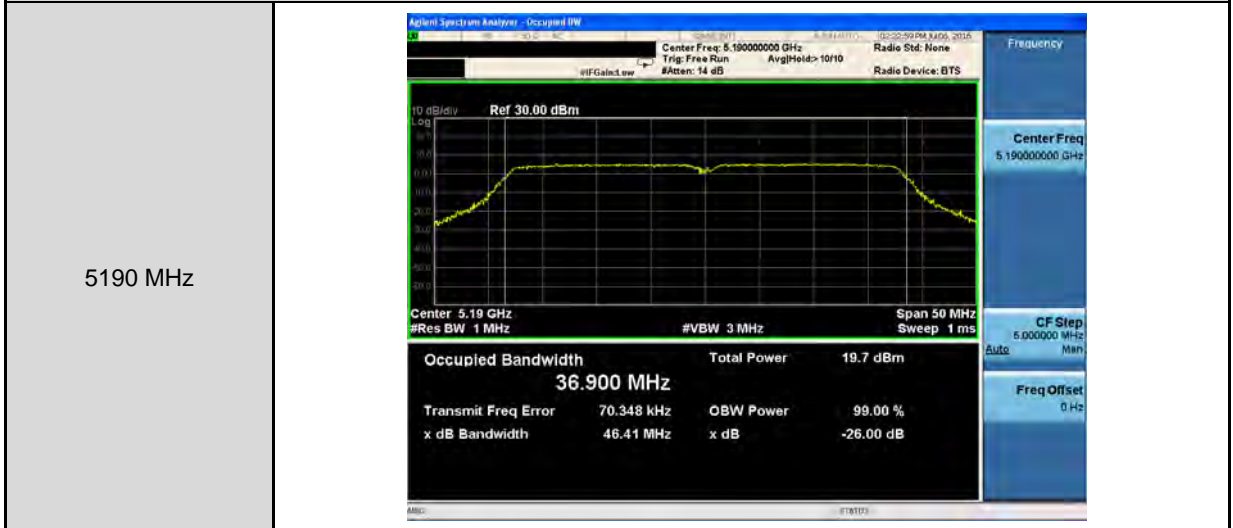
Mode 2: IEEE 802.11a Link Mode_ ANT-0																			
5180 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.18000000 GHz Trig: Free Run Avg/Hold: >10/10 Radio Std: None Radio Device: BTS</p> <p>Ref 30.00 dBm</p> <p>Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>22.8 dBm</td> </tr> <tr> <td>16.713 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>32.732 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>22.03 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	22.8 dBm	16.713 MHz			Transmit Freq Error	OBW Power	99.00 %	32.732 kHz			x dB Bandwidth	x dB	-26.00 dB	22.03 MHz		
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5200 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.20000000 GHz Trig: Free Run Avg/Hold: >10/10 Radio Std: None Radio Device: BTS</p> <p>Ref 30.00 dBm</p> <p>Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>25.6 dBm</td> </tr> <tr> <td>16.800 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>29.438 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>24.25 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	25.6 dBm	16.800 MHz			Transmit Freq Error	OBW Power	99.00 %	29.438 kHz			x dB Bandwidth	x dB	-26.00 dB	24.25 MHz		
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5240 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.24000000 GHz Trig: Free Run Avg/Hold: >10/10 Radio Std: None Radio Device: BTS</p> <p>Ref 30.00 dBm</p> <p>Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>24.7 dBm</td> </tr> <tr> <td>16.767 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>2.122 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>23.63 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	24.7 dBm	16.767 MHz			Transmit Freq Error	OBW Power	99.00 %	2.122 kHz			x dB Bandwidth	x dB	-26.00 dB	23.63 MHz		
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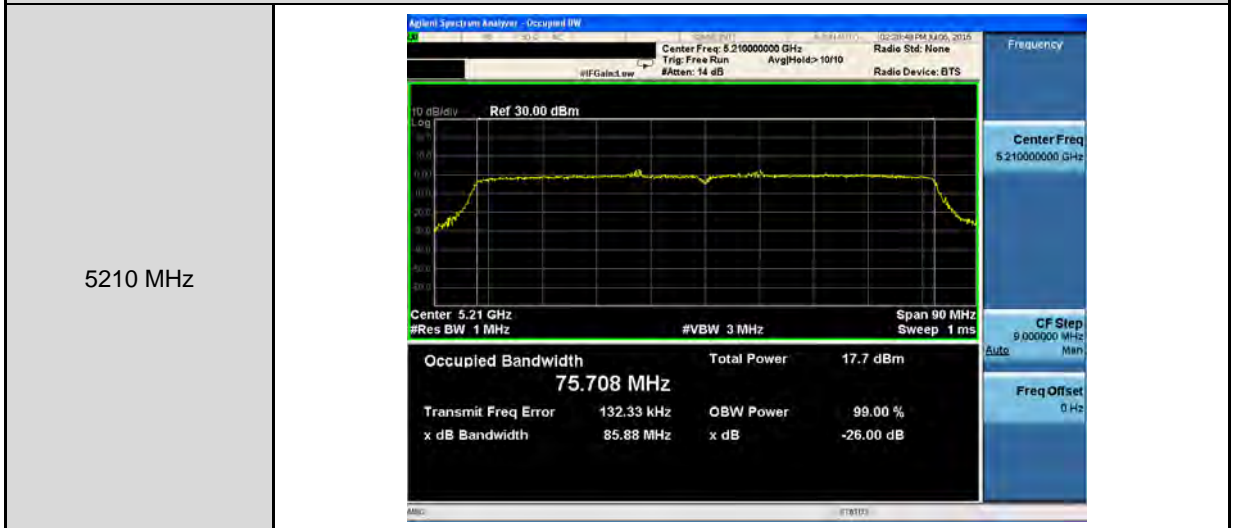
Mode 3: IEEE 802.11ac 20MHz Link Mode_ ANT-0																			
5180 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.18000000 GHz Trig: Free Run Avg/Hold: >10/10 Radio Std: None Radio Device: BTS</p> <p>Ref 30.00 dBm</p> <p>Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>22.9 dBm</td> </tr> <tr> <td>17.878 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>35.411 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>23.37 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	22.9 dBm	17.878 MHz			Transmit Freq Error	OBW Power	99.00 %	35.411 kHz			x dB Bandwidth	x dB	-26.00 dB	23.37 MHz		
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5200 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.20000000 GHz Trig: Free Run Avg/Hold: >10/10 Radio Std: None Radio Device: BTS</p> <p>Ref 30.00 dBm</p> <p>Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>24.7 dBm</td> </tr> <tr> <td>17.881 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>15.308 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>24.42 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	24.7 dBm	17.881 MHz			Transmit Freq Error	OBW Power	99.00 %	15.308 kHz			x dB Bandwidth	x dB	-26.00 dB	24.42 MHz		
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24.42 MHz																			
5240 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.24000000 GHz Trig: Free Run Avg/Hold: >10/10 Radio Std: None Radio Device: BTS</p> <p>Ref 30.00 dBm</p> <p>Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>25.1 dBm</td> </tr> <tr> <td>17.900 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>12.656 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>24.49 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	25.1 dBm	17.900 MHz			Transmit Freq Error	OBW Power	99.00 %	12.656 kHz			x dB Bandwidth	x dB	-26.00 dB	24.49 MHz		
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Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-0



Mode 5: IEEE 802.11ac 80MHz Link Mode_ ANT-0





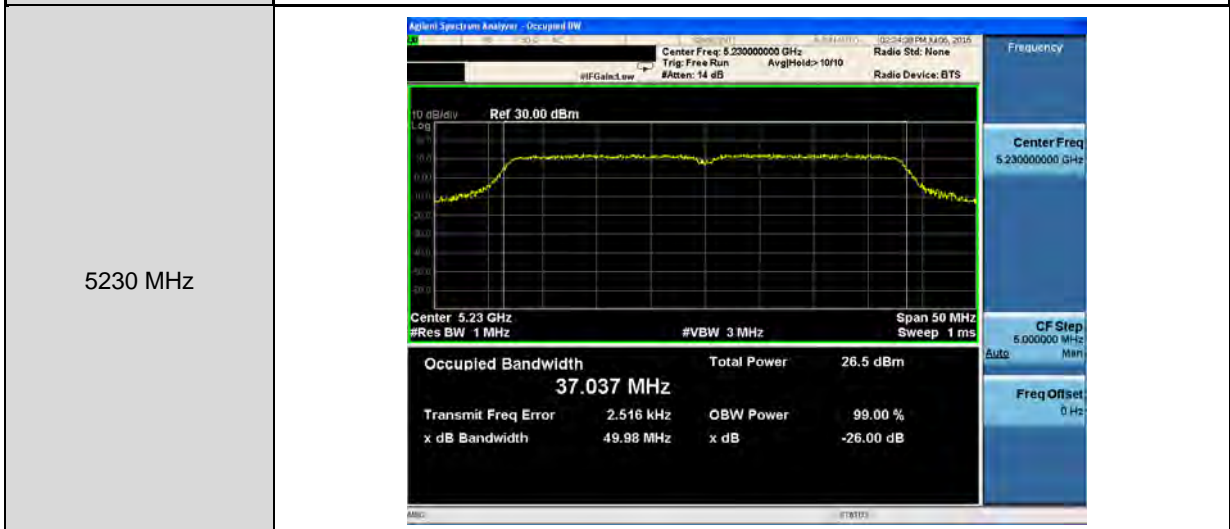
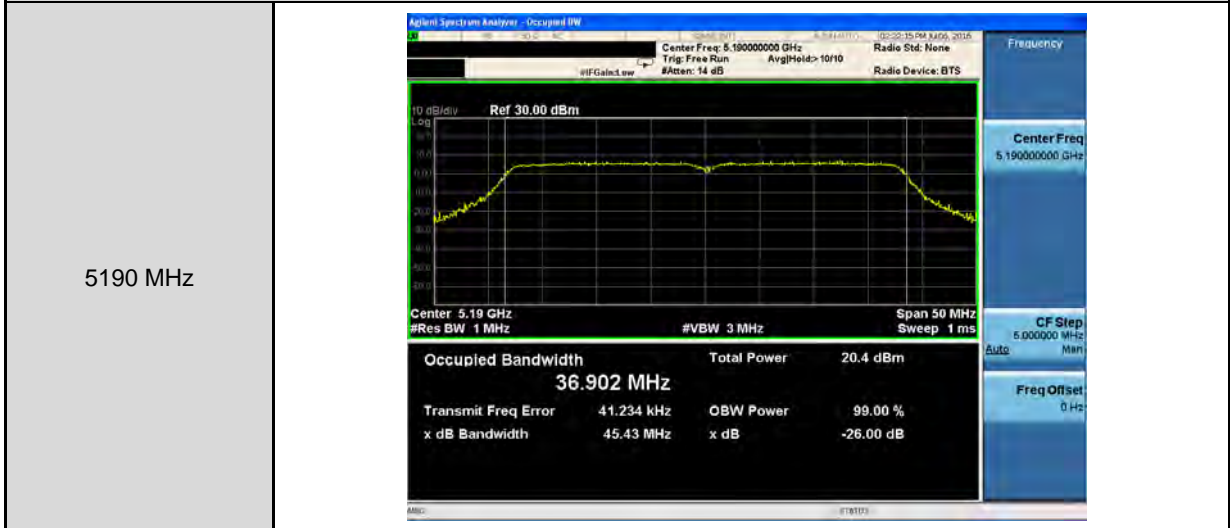
Mode 2: IEEE 802.11a Link Mode_ ANT-1																			
5180 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.180000000 GHz Trig: Free Run AvgHeld: 10/10 Radio Std: None Radio Device: BTS</p> <p>Ref 30.00 dBm</p> <p>Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>24.0 dBm</td> </tr> <tr> <td>16.757 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>15.624 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>22.86 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	24.0 dBm	16.757 MHz			Transmit Freq Error	OBW Power	99.00 %	15.624 kHz			x dB Bandwidth	x dB	-26.00 dB	22.86 MHz		
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5200 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.200000000 GHz Trig: Free Run AvgHeld: 10/10 Radio Std: None Radio Device: BTS</p> <p>Ref 30.00 dBm</p> <p>Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>25.2 dBm</td> </tr> <tr> <td>16.833 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-15.846 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>24.84 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	25.2 dBm	16.833 MHz			Transmit Freq Error	OBW Power	99.00 %	-15.846 kHz			x dB Bandwidth	x dB	-26.00 dB	24.84 MHz		
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16.833 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
-15.846 kHz																			
x dB Bandwidth	x dB	-26.00 dB																	
24.84 MHz																			
5240 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.240000000 GHz Trig: Free Run AvgHeld: 10/10 Radio Std: None Radio Device: BTS</p> <p>Ref 30.00 dBm</p> <p>Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>24.7 dBm</td> </tr> <tr> <td>16.875 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>17.017 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>25.00 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	24.7 dBm	16.875 MHz			Transmit Freq Error	OBW Power	99.00 %	17.017 kHz			x dB Bandwidth	x dB	-26.00 dB	25.00 MHz		
Occupied Bandwidth	Total Power	24.7 dBm																	
16.875 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
17.017 kHz																			
x dB Bandwidth	x dB	-26.00 dB																	
25.00 MHz																			



Mode 3: IEEE 802.11ac 20MHz Link Mode_ ANT-1																			
5180 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.180000000 GHz Trig: Free Run #Acq: 14 dB</p> <p>Radio Std: None Radio Device: BTS</p> <p>Ref 30.00 dBm</p> <p>Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>24.0 dBm</td></tr><tr><td>17.859 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>20.587 kHz</td><td></td><td></td></tr><tr><td>x dB Bandwidth</td><td>x dB</td><td>-26.00 dB</td></tr><tr><td>24.50 MHz</td><td></td><td></td></tr></table>	Occupied Bandwidth	Total Power	24.0 dBm	17.859 MHz			Transmit Freq Error	OBW Power	99.00 %	20.587 kHz			x dB Bandwidth	x dB	-26.00 dB	24.50 MHz		
Occupied Bandwidth	Total Power	24.0 dBm																	
17.859 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
20.587 kHz																			
x dB Bandwidth	x dB	-26.00 dB																	
24.50 MHz																			
5200 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.200000000 GHz Trig: Free Run #Acq: 20 dB</p> <p>Radio Std: None Radio Device: BTS</p> <p>Ref 30.00 dBm</p> <p>Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>24.9 dBm</td></tr><tr><td>17.961 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>249 Hz</td><td></td><td></td></tr><tr><td>x dB Bandwidth</td><td>x dB</td><td>-26.00 dB</td></tr><tr><td>25.00 MHz</td><td></td><td></td></tr></table>	Occupied Bandwidth	Total Power	24.9 dBm	17.961 MHz			Transmit Freq Error	OBW Power	99.00 %	249 Hz			x dB Bandwidth	x dB	-26.00 dB	25.00 MHz		
Occupied Bandwidth	Total Power	24.9 dBm																	
17.961 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
249 Hz																			
x dB Bandwidth	x dB	-26.00 dB																	
25.00 MHz																			
5240 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.240000000 GHz Trig: Free Run #Acq: 20 dB</p> <p>Radio Std: None Radio Device: BTS</p> <p>Ref 30.00 dBm</p> <p>Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>25.1 dBm</td></tr><tr><td>17.982 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>24.486 kHz</td><td></td><td></td></tr><tr><td>x dB Bandwidth</td><td>x dB</td><td>-26.00 dB</td></tr><tr><td>25.00 MHz</td><td></td><td></td></tr></table>	Occupied Bandwidth	Total Power	25.1 dBm	17.982 MHz			Transmit Freq Error	OBW Power	99.00 %	24.486 kHz			x dB Bandwidth	x dB	-26.00 dB	25.00 MHz		
Occupied Bandwidth	Total Power	25.1 dBm																	
17.982 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
24.486 kHz																			
x dB Bandwidth	x dB	-26.00 dB																	
25.00 MHz																			



Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-1



Mode 5: IEEE 802.11ac 80MHz Link Mode_ ANT-1





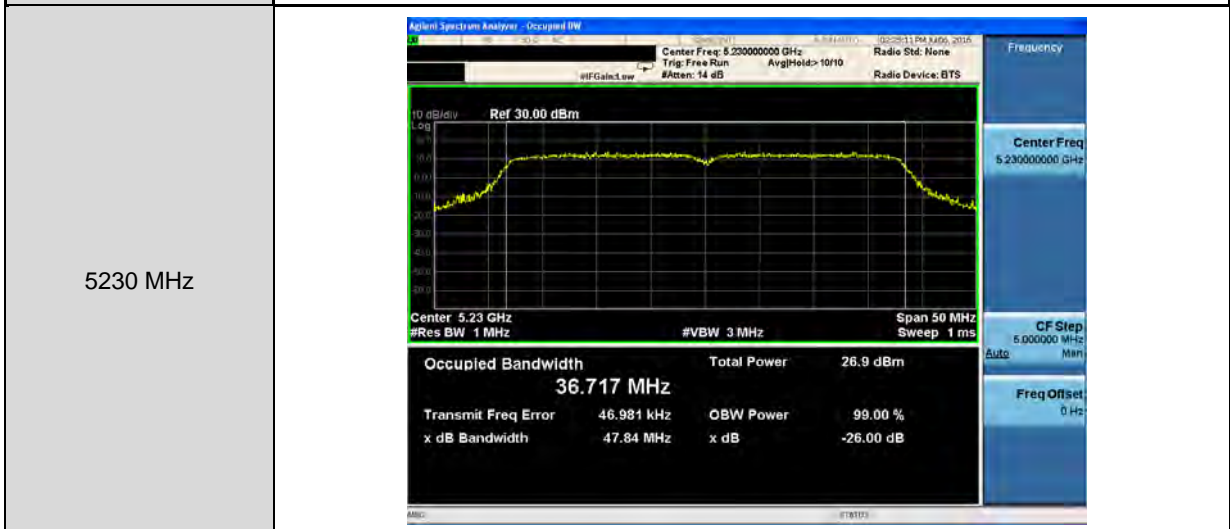
Mode 2: IEEE 802.11a Link Mode_ ANT-2																			
5180 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.180000000 GHz Trig: Free Run #Acq: 14 dB</p> <p>Radio Std: None Radio Device: BTS</p> <p>Ref 30.00 dBm</p> <p>Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>23.7 dBm</td></tr><tr><td>16.639 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>27.800 kHz</td><td></td><td></td></tr><tr><td>x dB Bandwidth</td><td>x dB</td><td>-26.00 dB</td></tr><tr><td>21.66 MHz</td><td></td><td></td></tr></table>	Occupied Bandwidth	Total Power	23.7 dBm	16.639 MHz			Transmit Freq Error	OBW Power	99.00 %	27.800 kHz			x dB Bandwidth	x dB	-26.00 dB	21.66 MHz		
Occupied Bandwidth	Total Power	23.7 dBm																	
16.639 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
27.800 kHz																			
x dB Bandwidth	x dB	-26.00 dB																	
21.66 MHz																			
5200 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.200000000 GHz Trig: Free Run #Acq: 20 dB</p> <p>Radio Std: None Radio Device: BTS</p> <p>Ref 30.00 dBm</p> <p>Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>28.3 dBm</td></tr><tr><td>16.689 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>20.564 kHz</td><td></td><td></td></tr><tr><td>x dB Bandwidth</td><td>x dB</td><td>-26.00 dB</td></tr><tr><td>23.04 MHz</td><td></td><td></td></tr></table>	Occupied Bandwidth	Total Power	28.3 dBm	16.689 MHz			Transmit Freq Error	OBW Power	99.00 %	20.564 kHz			x dB Bandwidth	x dB	-26.00 dB	23.04 MHz		
Occupied Bandwidth	Total Power	28.3 dBm																	
16.689 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
20.564 kHz																			
x dB Bandwidth	x dB	-26.00 dB																	
23.04 MHz																			
5240 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.240000000 GHz Trig: Free Run #Acq: 20 dB</p> <p>Radio Std: None Radio Device: BTS</p> <p>Ref 30.00 dBm</p> <p>Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>25.6 dBm</td></tr><tr><td>16.714 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>22.662 kHz</td><td></td><td></td></tr><tr><td>x dB Bandwidth</td><td>x dB</td><td>-26.00 dB</td></tr><tr><td>22.21 MHz</td><td></td><td></td></tr></table>	Occupied Bandwidth	Total Power	25.6 dBm	16.714 MHz			Transmit Freq Error	OBW Power	99.00 %	22.662 kHz			x dB Bandwidth	x dB	-26.00 dB	22.21 MHz		
Occupied Bandwidth	Total Power	25.6 dBm																	
16.714 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
22.662 kHz																			
x dB Bandwidth	x dB	-26.00 dB																	
22.21 MHz																			



Mode 3: IEEE 802.11ac 20MHz Link Mode_ ANT-2													
5180 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.180000000 GHz Trig: Free Run #Acq: 14 dB</p> <p>Ref 30.00 dBm</p> <p>Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"><tr><td>Occupied Bandwidth</td><td>17.830 MHz</td><td>Total Power</td><td>23.7 dBm</td></tr><tr><td>Transmit Freq Error</td><td>15.042 kHz</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>x dB Bandwidth</td><td>23.12 MHz</td><td>x dB</td><td>-26.00 dB</td></tr></table>	Occupied Bandwidth	17.830 MHz	Total Power	23.7 dBm	Transmit Freq Error	15.042 kHz	OBW Power	99.00 %	x dB Bandwidth	23.12 MHz	x dB	-26.00 dB
Occupied Bandwidth	17.830 MHz	Total Power	23.7 dBm										
Transmit Freq Error	15.042 kHz	OBW Power	99.00 %										
x dB Bandwidth	23.12 MHz	x dB	-26.00 dB										
5200 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.200000000 GHz Trig: Free Run #Acq: 20 dB</p> <p>Ref 30.00 dBm</p> <p>Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"><tr><td>Occupied Bandwidth</td><td>17.839 MHz</td><td>Total Power</td><td>26.2 dBm</td></tr><tr><td>Transmit Freq Error</td><td>24.602 kHz</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>x dB Bandwidth</td><td>24.40 MHz</td><td>x dB</td><td>-26.00 dB</td></tr></table>	Occupied Bandwidth	17.839 MHz	Total Power	26.2 dBm	Transmit Freq Error	24.602 kHz	OBW Power	99.00 %	x dB Bandwidth	24.40 MHz	x dB	-26.00 dB
Occupied Bandwidth	17.839 MHz	Total Power	26.2 dBm										
Transmit Freq Error	24.602 kHz	OBW Power	99.00 %										
x dB Bandwidth	24.40 MHz	x dB	-26.00 dB										
5240 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.240000000 GHz Trig: Free Run #Acq: 20 dB</p> <p>Ref 30.00 dBm</p> <p>Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"><tr><td>Occupied Bandwidth</td><td>17.834 MHz</td><td>Total Power</td><td>25.1 dBm</td></tr><tr><td>Transmit Freq Error</td><td>28.667 kHz</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>x dB Bandwidth</td><td>23.75 MHz</td><td>x dB</td><td>-26.00 dB</td></tr></table>	Occupied Bandwidth	17.834 MHz	Total Power	25.1 dBm	Transmit Freq Error	28.667 kHz	OBW Power	99.00 %	x dB Bandwidth	23.75 MHz	x dB	-26.00 dB
Occupied Bandwidth	17.834 MHz	Total Power	25.1 dBm										
Transmit Freq Error	28.667 kHz	OBW Power	99.00 %										
x dB Bandwidth	23.75 MHz	x dB	-26.00 dB										



Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-2



Mode 5: IEEE 802.11ac 80MHz Link Mode_ ANT-2



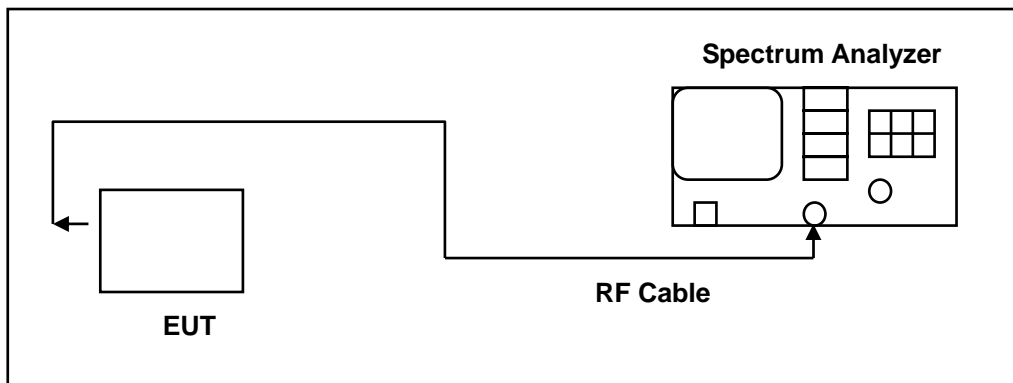
4.6. 6dB RF Bandwidth Measurement

■ 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.

■ Test Setup



■ Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/15/2015	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

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

■ Test Procedure

6dB RF Bandwidth

The EUT tested to UNII test procedure of KDB789033 D02 for compliance to FCC 47CFR 15.407 requirements. The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RES BW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A peak output reading was taken, a DISPLAY line was drawn 6 dB lower than peak level. The 6 dB bandwidth was determined from where the channel output spectrum intersected the display line.

The test was performed at 3 channels.



■ Test Result

Model Number	Archer C7			
Test Item	6dB RF Bandwidth			
Test Mode	Mode 2: IEEE 802.11a Link Mode			
Date of Test	07/06/2016			
Frequency (MHz)	6dB Bandwidth (kHz)			Limit (kHz)
	ANT-0	ANT-1	ANT-2	
5745	15760	15450	16330	> 500
5785	16020	15460	16350	> 500
5825	15350	16290	15110	> 500

Model Number	Archer C7			
Test Item	6dB RF Bandwidth			
Test Mode	Mode 3: IEEE 802.11ac 20MHz Link Mode			
Date of Test	03/19/2016			
Frequency (MHz)	6dB Bandwidth (kHz)			Limit (kHz)
	ANT-0	ANT-1	ANT-2	
5745	17190	15160	16660	> 500
5785	16920	16170	16330	> 500
5825	15510	15160	17300	> 500

Model Number	Archer C7			
Test Item	6dB RF Bandwidth			
Test Mode	Mode 4: IEEE 802.11ac 40MHz Link Mode			
Date of Test	03/19/2016			
Frequency (MHz)	6dB Bandwidth (kHz)			Limit (kHz)
	ANT-0	ANT-1	ANT-2	
5755	35180	35300	35750	> 500
5795	35210	35670	35140	> 500



Model Number	Archer C7			
Test Item	6dB RF Bandwidth			
Test Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode			
Date of Test	03/19/2016			
Frequency (MHz)	6dB Bandwidth (kHz)			Limit (kHz)
	ANT-0	ANT-1	ANT-2	
5775	71780	75440	75700	> 500



■ Test Graphs

Mode 2: IEEE 802.11a Link Mode_ANT-0																			
5745 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.745000000 GHz Trig: Free Run Avg/Hold: 10/10 #Res BW: 100 kHz #VBW: 300 kHz Span: 30 MHz Sweep: 2.933 ms</p> <p>Ref 30.00 dBm</p> <p>Center 5.745 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>28.4 dBm</td> </tr> <tr> <td>23.153 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-164.04 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>15.76 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	28.4 dBm	23.153 MHz			Transmit Freq Error	OBW Power	99.00 %	-164.04 kHz	x dB	-6.00 dB	x dB Bandwidth			15.76 MHz		
Occupied Bandwidth	Total Power	28.4 dBm																	
23.153 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
-164.04 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
15.76 MHz																			
5785 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.785000000 GHz Trig: Free Run Avg/Hold: 10/10 #Res BW: 100 kHz #VBW: 300 kHz Span: 30 MHz Sweep: 2.933 ms</p> <p>Ref 30.00 dBm</p> <p>Center 5.785 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>29.0 dBm</td> </tr> <tr> <td>26.896 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-24.749 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>16.02 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	29.0 dBm	26.896 MHz			Transmit Freq Error	OBW Power	99.00 %	-24.749 kHz	x dB	-6.00 dB	x dB Bandwidth			16.02 MHz		
Occupied Bandwidth	Total Power	29.0 dBm																	
26.896 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
-24.749 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
16.02 MHz																			
5825 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.825000000 GHz Trig: Free Run Avg/Hold: 10/10 #Res BW: 100 kHz #VBW: 300 kHz Span: 30 MHz Sweep: 2.933 ms</p> <p>Ref 30.00 dBm</p> <p>Center 5.825 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>27.2 dBm</td> </tr> <tr> <td>23.640 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-15.786 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>15.35 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	27.2 dBm	23.640 MHz			Transmit Freq Error	OBW Power	99.00 %	-15.786 kHz	x dB	-6.00 dB	x dB Bandwidth			15.35 MHz		
Occupied Bandwidth	Total Power	27.2 dBm																	
23.640 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
-15.786 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
15.35 MHz																			



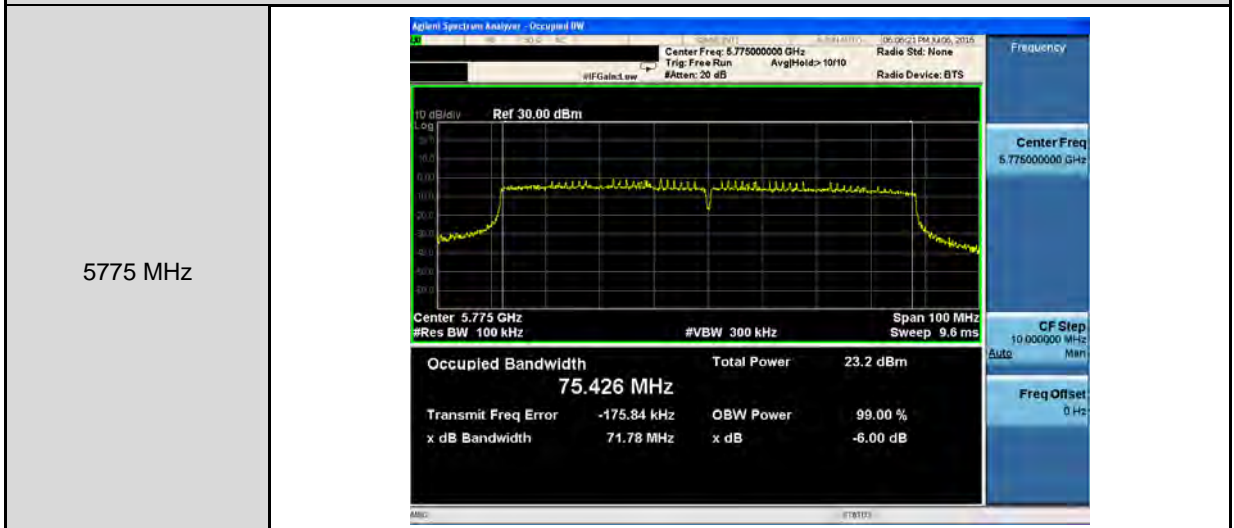
Mode 3: IEEE 802.11ac 20MHz Link Mode_ANT-0	
5745 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.745000000 GHz Trig: Free Run Avg/Hold: 10/10 #Res BW: 100 kHz #VBW: 300 kHz Span: 30 MHz Sweep: 2.933 ms</p> <p>Ref 30.00 dBm</p> <p>Occupied Bandwidth: 24.266 MHz Total Power: 30.1 dBm Transmit Freq Error: -80.994 kHz x dB Bandwidth: 17.19 MHz OBW Power: 99.00 % x dB: -6.00 dB</p>
5785 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.785000000 GHz Trig: Free Run Avg/Hold: 10/10 #Res BW: 100 kHz #VBW: 300 kHz Span: 30 MHz Sweep: 2.933 ms</p> <p>Ref 30.00 dBm</p> <p>Occupied Bandwidth: 26.936 MHz Total Power: 28.9 dBm Transmit Freq Error: -207.83 kHz x dB Bandwidth: 16.92 MHz OBW Power: 99.00 % x dB: -6.00 dB</p>
5825 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.825000000 GHz Trig: Free Run Avg/Hold: 10/10 #Res BW: 100 kHz #VBW: 300 kHz Span: 30 MHz Sweep: 2.933 ms</p> <p>Ref 30.00 dBm</p> <p>Occupied Bandwidth: 24.845 MHz Total Power: 27.6 dBm Transmit Freq Error: 503 Hz x dB Bandwidth: 15.51 MHz OBW Power: 99.00 % x dB: -6.00 dB</p>



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



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





Mode 2: IEEE 802.11a Link Mode_ANT-1	
5745 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.745000000 GHz Trig: Free Run Avg/Hold: 10/10 #FGain: 3.000 #Att: 20 dB</p> <p>Radio Std: None Radio Device: BTS</p> <p>Frequency: 5.745000000 GHz</p> <p>Center Freq: 5.745000000 GHz</p> <p>CF Step: 3.000000 MHz Auto Man</p> <p>Freq Offset: 0 Hz</p> <p>Center 5.745 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 25.256 MHz Total Power 29.1 dBm</p> <p>Transmit Freq Error -79.120 kHz OBW Power 99.00 % x dB Bandwidth 15.45 MHz x dB -6.00 dB</p>
5785 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.785000000 GHz Trig: Free Run Avg/Hold: 10/10 #FGain: 3.000 #Att: 20 dB</p> <p>Radio Std: None Radio Device: BTS</p> <p>Frequency: 5.785000000 GHz</p> <p>Center Freq: 5.785000000 GHz</p> <p>CF Step: 3.000000 MHz Auto Man</p> <p>Freq Offset: 0 Hz</p> <p>Center 5.785 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 26.984 MHz Total Power 30.1 dBm</p> <p>Transmit Freq Error 6.916 kHz OBW Power 99.00 % x dB Bandwidth 15.46 MHz x dB -6.00 dB</p>
5825 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.825000000 GHz Trig: Free Run Avg/Hold: 10/10 #FGain: 3.000 #Att: 20 dB</p> <p>Radio Std: None Radio Device: BTS</p> <p>Frequency: 5.825000000 GHz</p> <p>Center Freq: 5.825000000 GHz</p> <p>CF Step: 3.000000 MHz Auto Man</p> <p>Freq Offset: 0 Hz</p> <p>Center 5.825 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 25.298 MHz Total Power 29.2 dBm</p> <p>Transmit Freq Error 114.21 kHz OBW Power 99.00 % x dB Bandwidth 16.29 MHz x dB -6.00 dB</p>



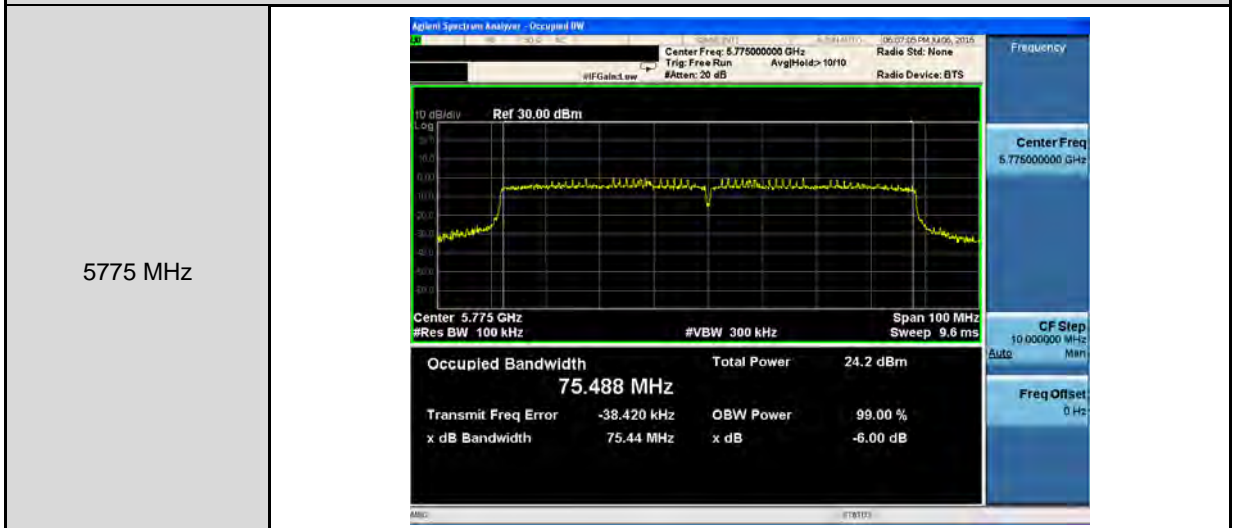
Mode 3: IEEE 802.11ac 20MHz Link Mode_ANT-1	
5745 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.745000000 GHz Trig: Free Run #FGain: 3.0 #Att: 20 dB</p> <p>Ref 30.00 dBm</p> <p>Center 5.745 GHz #Res BW 100 kHz</p> <p>Span 30 MHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 25.529 MHz</p> <p>Total Power 29.5 dBm</p> <p>Transmit Freq Error 32.099 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 15.16 MHz</p> <p>x dB -6.00 dB</p>
5785 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.785000000 GHz Trig: Free Run #FGain: 3.0 #Att: 20 dB</p> <p>Ref 30.00 dBm</p> <p>Center 5.785 GHz #Res BW 100 kHz</p> <p>Span 30 MHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 27.225 MHz</p> <p>Total Power 30.3 dBm</p> <p>Transmit Freq Error 31.524 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 16.17 MHz</p> <p>x dB -6.00 dB</p>
5825 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.825000000 GHz Trig: Free Run #FGain: 3.0 #Att: 20 dB</p> <p>Ref 30.00 dBm</p> <p>Center 5.825 GHz #Res BW 100 kHz</p> <p>Span 30 MHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 25.751 MHz</p> <p>Total Power 29.4 dBm</p> <p>Transmit Freq Error 3.735 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 15.16 MHz</p> <p>x dB -6.00 dB</p>



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



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





Mode 2: IEEE 802.11a Link Mode_ANT-2																			
5745 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.745000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS</p> <p>Ref 30.00 dBm</p> <p>Center 5.745 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>29.1 dBm</td> </tr> <tr> <td>23.066 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>32.636 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>16.33 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	29.1 dBm	23.066 MHz			Transmit Freq Error	OBW Power	99.00 %	32.636 kHz	x dB	-6.00 dB	x dB Bandwidth			16.33 MHz		
Occupied Bandwidth	Total Power	29.1 dBm																	
23.066 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
32.636 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
16.33 MHz																			
5785 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.785000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS</p> <p>Ref 30.00 dBm</p> <p>Center 5.785 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>30.6 dBm</td> </tr> <tr> <td>26.931 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>21.674 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>16.35 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	30.6 dBm	26.931 MHz			Transmit Freq Error	OBW Power	99.00 %	21.674 kHz	x dB	-6.00 dB	x dB Bandwidth			16.35 MHz		
Occupied Bandwidth	Total Power	30.6 dBm																	
26.931 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
21.674 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
16.35 MHz																			
5825 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.825000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS</p> <p>Ref 30.00 dBm</p> <p>Center 5.825 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>30.2 dBm</td> </tr> <tr> <td>24.744 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>52.563 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>15.11 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	30.2 dBm	24.744 MHz			Transmit Freq Error	OBW Power	99.00 %	52.563 kHz	x dB	-6.00 dB	x dB Bandwidth			15.11 MHz		
Occupied Bandwidth	Total Power	30.2 dBm																	
24.744 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
52.563 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
15.11 MHz																			



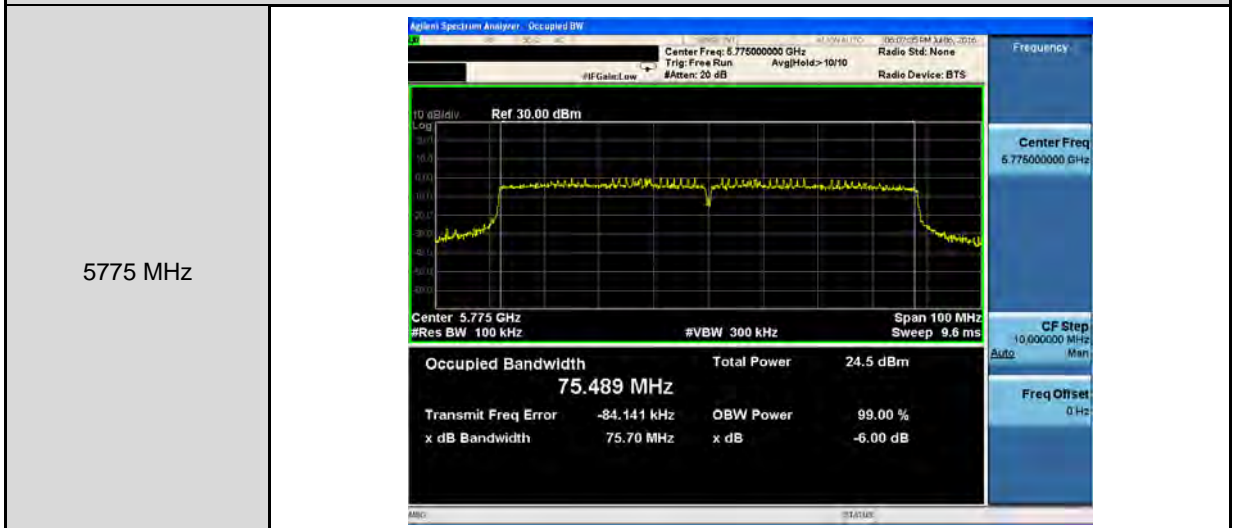
Mode 3: IEEE 802.11ac 20MHz Link Mode_ANT-2	
5745 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.745000000 GHz Trig: Free Run Avg/Hold: 10/10 #IF Gain: Low #Atten: 20 dB Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref 30.00 dBm</p> <p>Center 5.745 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 25.313 MHz</p> <p>Total Power 29.7 dBm</p> <p>Transmit Freq Error 82.579 kHz OBW Power 99.00 % x dB Bandwidth 16.66 MHz x dB -6.00 dB</p> <p>Frequency: 5.745000000 GHz CF Step: 3.000000 MHz Freq Offset: 0 Hz</p>
5785 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.785000000 GHz Trig: Free Run Avg/Hold: 10/10 #IF Gain: Low #Atten: 20 dB Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref 30.00 dBm</p> <p>Center 5.785 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 26.980 MHz</p> <p>Total Power 30.7 dBm</p> <p>Transmit Freq Error -23.234 kHz OBW Power 99.00 % x dB Bandwidth 16.33 MHz x dB -6.00 dB</p> <p>Frequency: 5.785000000 GHz CF Step: 3.000000 MHz Freq Offset: 0 Hz</p>
5825 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.825000000 GHz Trig: Free Run Avg/Hold: 10/10 #IF Gain: Low #Atten: 20 dB Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref 30.00 dBm</p> <p>Center 5.825 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 25.712 MHz</p> <p>Total Power 30.3 dBm</p> <p>Transmit Freq Error -25.522 kHz OBW Power 99.00 % x dB Bandwidth 17.30 MHz x dB -6.00 dB</p> <p>Frequency: 5.825000000 GHz CF Step: 3.000000 MHz Freq Offset: 0 Hz</p>



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



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



4.7. Peak Power Spectral Density Measurement

■ **Limit**

Conducted power spectral density

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

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.

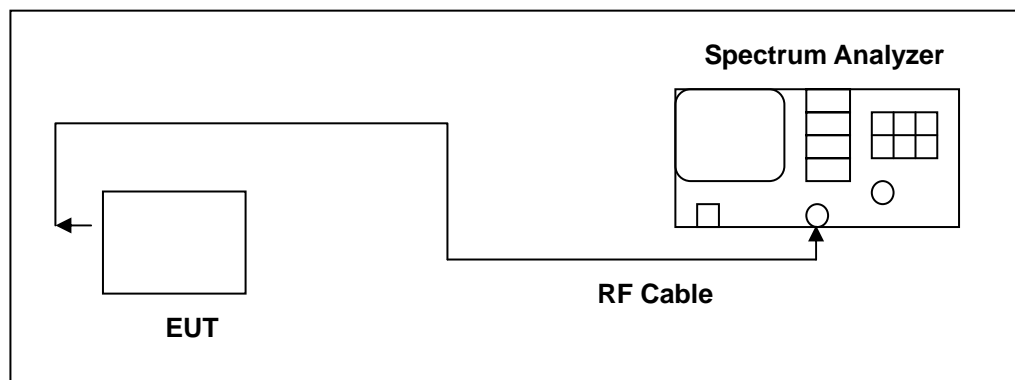
According FCC KDB 662911 D01 v02r01 – for Power Spectral Density Measurement on IEEE802.11 devices,
 Directional gain = $10 \cdot \log\{[10^{(G1/20)} + 10^{(G2/20)} + \dots + 10^{(Gn/20)}]^2 / NANT\}$

* CDD mode : Directional Gain = $10 \cdot \log\{[10^{(G1/20)} + 10^{(G2/20)} + \dots + 10^{(Gn/20)}]^2 / NANT\} = 9.77 \text{ dBi} > 6\text{dBi}$

CDD mode power limit shall be reduced = $17 - 3.77 = 13.23 \text{ dBm/MHz}$ (5.150 ~ 5.250 GHz)

CDD mode power spectral density limit shall be reduced = $30 - 3.77 = 26.23 \text{ dBm/ 500KHz}$ (5.725 ~ 5.850 GHz)

■ **Test Setup**



■ **Test Instruments**

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/15/2015	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 v01r02, Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	1 MHz (5725 ~ 5850MHz use 100 kHz)
VBW	3 MHz (5725 ~ 5850MHz use 300 kHz)
Detector	RMS
Trace	AVERAGE
Sweep Time	Auto
Trace Average	100 times
Note: If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/100\text{kHz})$ to the measured result.	



■ Test Result

Model Number	Archer C7			
Test Item	Conducted power spectral density			
Test Mode	Mode 2: IEEE 802.11a link mode			
Date of Test	07/06/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	5.479	0.126	5.605	< 17
5200	6.975	0.126	7.101	
5240	7.225	0.126	7.351	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	5.903	0.126	6.029	< 17
5200	7.305	0.126	7.431	
5240	7.616	0.126	7.742	
Frequency (MHz)	ANT-2			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	5.895	0.126	6.021	< 17
5200	7.741	0.126	7.867	
5240	8.199	0.126	8.325	
Frequency (MHz)	ANT-0+1+2			Limit (dBm/MHz)
	Calculated (dBm/MHz)			
5180	10.661			< 13.23
5200	12.249			
5240	12.596			

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



Model Number	Archer C7			
Test Item	Conducted power spectral density			
Test Mode	Mode 2: IEEE 802.11a link mode			
Date of Test	07/06/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
	5745	0.57	0.126	7.69
	5785	0.88	0.126	7.99
5825	-0.36	0.126	6.76	< 30
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
	5745	1.00	0.126	8.12
	5785	1.47	0.126	8.59
5825	0.65	0.126	7.76	< 30
Frequency (MHz)	ANT-2			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
	5745	1.27	0.126	8.38
	5785	2.43	0.126	9.54
5825	1.56	0.126	8.67	< 30
Frequency (MHz)	ANT-0+1+2			Limit (dBm/500KHz)
	Calculated (dBm/500KHz)			
	5745	12.84		< 26.23
	5785	13.53		
5825	12.57			

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

Conversion ratio = 10*Log(500k/100k)



Model Number	Archer C7			
Test Item	Conducted power spectral density			
Test Mode	Mode 3: IEEE 802.11ac 20MHz link mode			
Date of Test	07/06/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
	5180	5.210	0.210	5.420
	5200	6.895	0.210	7.105
5240	6.823	0.210	7.033	< 17
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
	5180	5.737	0.210	5.947
	5200	7.439	0.210	7.649
5240	7.115	0.210	7.325	< 17
Frequency (MHz)	ANT-2			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
	5180	5.769	0.210	5.979
	5200	7.712	0.210	7.922
5240	7.314	0.210	7.524	< 17
Frequency (MHz)	ANT-0+1+2			
		Calculated (dBm/MHz)		Limit (dBm/MHz)
	5180	10.561		< 13.23
	5200	12.343		
5240	12.070			

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



Model Number	Archer C7			
Test Item	Conducted power spectral density			
Test Mode	Mode 3: IEEE 802.11ac 20MHz link mode			
Date of Test	07/06/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
	5745	0.68	0.210	< 30
	5785	0.23	0.210	
5825	-0.58	0.210		
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
	5745	0.70	0.210	< 30
	5785	0.66	0.210	
5825	0.80	0.210		
Frequency (MHz)	ANT-2			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
	5745	1.25	0.210	< 30
	5785	1.70	0.210	
5825	1.45	0.210		
Frequency (MHz)	ANT-0+1+2			Limit (dBm/500KHz)
	Calculated (dBm/500KHz)			
	5745	12.86		< 26.23
	5785	12.88		
5825	12.60			

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

Conversion ratio = 10*Log(500k/100k)



Model Number	Archer C7			
Test Item	Conducted power spectral density			
Test Mode	Mode 4: IEEE 802.11ac 40MHz link mode			
Date of Test	07/06/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
	5190	-2.336	0.223	-2.113
5230	4.615	0.223	4.838	< 17
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
	5190	-2.044	0.223	-1.821
5230	4.180	0.223	4.403	< 17
Frequency (MHz)	ANT-2			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
	5190	-2.045	0.223	-1.822
5230	5.257	0.223	5.480	< 17
Frequency (MHz)	ANT-0+1+2			
		Calculated (dBm/MHz)		Limit (dBm/MHz)
	5190	2.854		< 13.23
5230	9.701			

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



Model Number	Archer C7			
Test Item	Conducted power spectral density			
Test Mode	Mode 4: IEEE 802.11ac 40MHz link mode			
Date of Test	07/06/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
	5755	-3.30	0.223	3.92
5795	-3.45	0.223	3.77	< 30
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
	5755	-3.58	0.223	3.63
5795	-3.30	0.223	3.92	< 30
Frequency (MHz)	ANT-2			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
	5755	-3.14	0.223	4.08
5795	-2.68	0.223	4.53	< 30
Frequency (MHz)	ANT-0+1+2			
		Calculated (dBm/500KHz)		Limit (dBm/500KHz)
	5755	8.65		< 26.23
5795	8.86			

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

Conversion ratio = 10*Log(500k/100k)



Model Number	Archer C7			
Test Item	Conducted power spectral density			
Test Mode	Mode 5: IEEE 802.11ac 80MHz link mode			
Date of Test	07/06/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-7.879	0.530	-7.349	< 17
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-7.693	0.530	-7.163	< 17
Frequency (MHz)	ANT-2			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-7.602	0.530	-7.072	< 17
Frequency (MHz)	ANT-0+1+2			Limit (dBm/MHz)
	Calculated (dBm/MHz)			Limit (dBm/MHz)
5210	-2.422			< 13.23

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



Model Number	Archer C7			
Test Item	Conducted power spectral density			
Test Mode	Mode 5: IEEE 802.11ac 80MHz link mode			
Date of Test	07/06/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/MHz)
5775	-10.14	0.530	-2.62	< 30
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/MHz)
5775	-10.47	0.530	-2.95	< 30
Frequency (MHz)	ANT-2			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/MHz)
5775	-9.70	0.530	-2.18	< 30
Frequency (MHz)	ANT-0+1+2			Limit (dBm/MHz)
	Calculated (dBm/500KHz)			Limit (dBm/MHz)
5775	2.20			< 26.23

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

Conversion ratio = 10*Log(500k/100k)



■ Test Graphs

Mode 2: IEEE 802.11a Link Mode_ ANT-0	
5180 MHz	<p>Agilent Spectrum Analyzer: Sweep SA PNO: Fast Trig: Free Run Avg Type: RMS IF Gain: Low Atten: 20 dB AvgHold: 100/100 Ref Offset 11.5 dB Ref 20.00 dBm Mkr1 5.185 20 GHz 6.478 dBm Center 5.18000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts) Span 40.00 MHz</p>
5200 MHz	<p>Agilent Spectrum Analyzer: Sweep SA PNO: Fast Trig: Free Run Avg Type: RMS IF Gain: Low Atten: 20 dB AvgHold: 100/100 Ref Offset 11.5 dB Ref 20.00 dBm Mkr1 5.196 88 GHz 6.975 dBm Center 5.20000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts) Span 40.00 MHz</p>
5240 MHz	<p>Agilent Spectrum Analyzer: Sweep SA PNO: Fast Trig: Free Run Avg Type: RMS IF Gain: Low Atten: 20 dB AvgHold: 100/100 Ref Offset 11.5 dB Ref 20.00 dBm Mkr1 5.246 84 GHz 7.225 dBm Center 5.24000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts) Span 40.00 MHz</p>



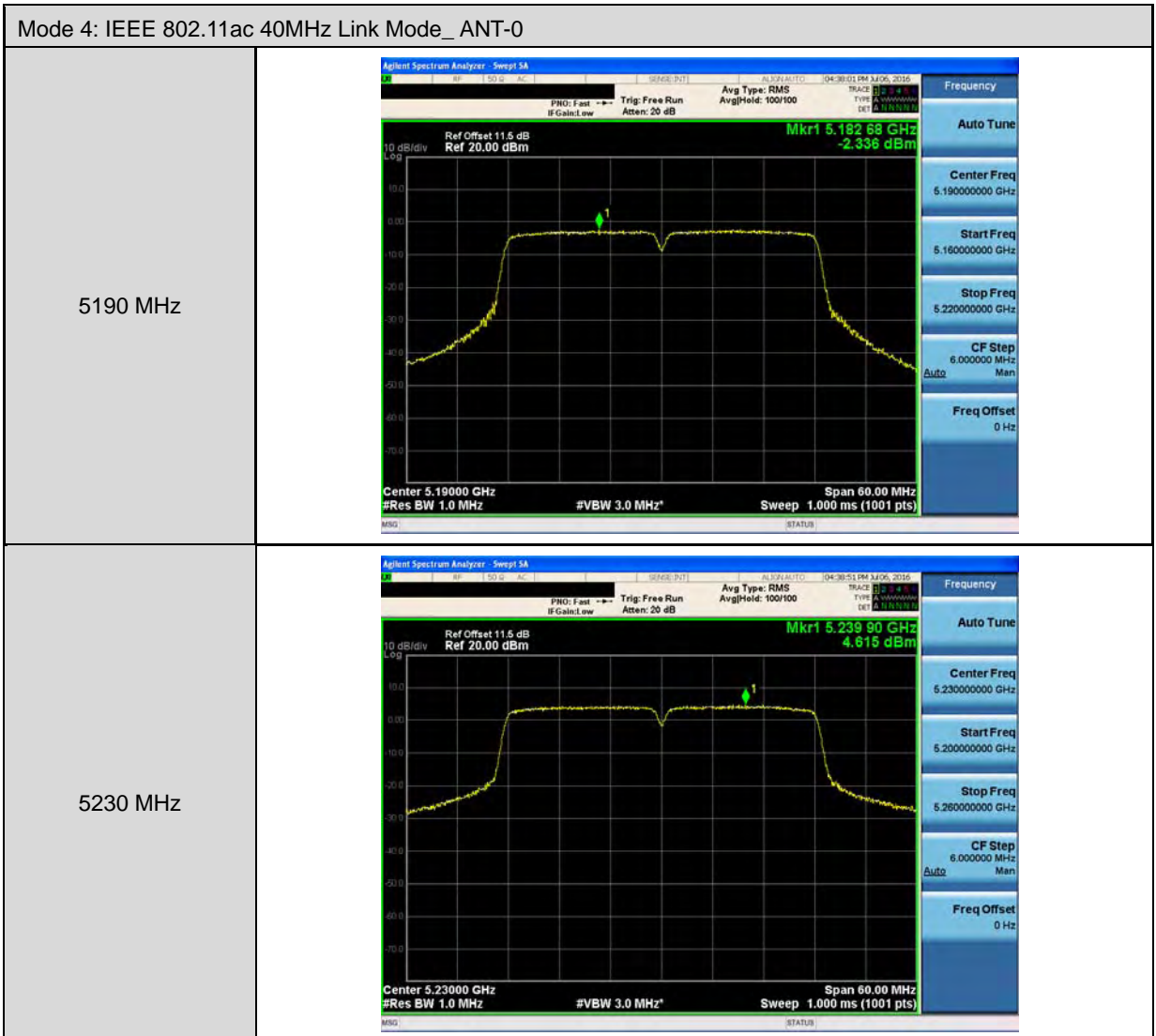
Mode 2: IEEE 802.11a Link Mode_ ANT-0	
5745 MHz	
5785 MHz	
5825 MHz	

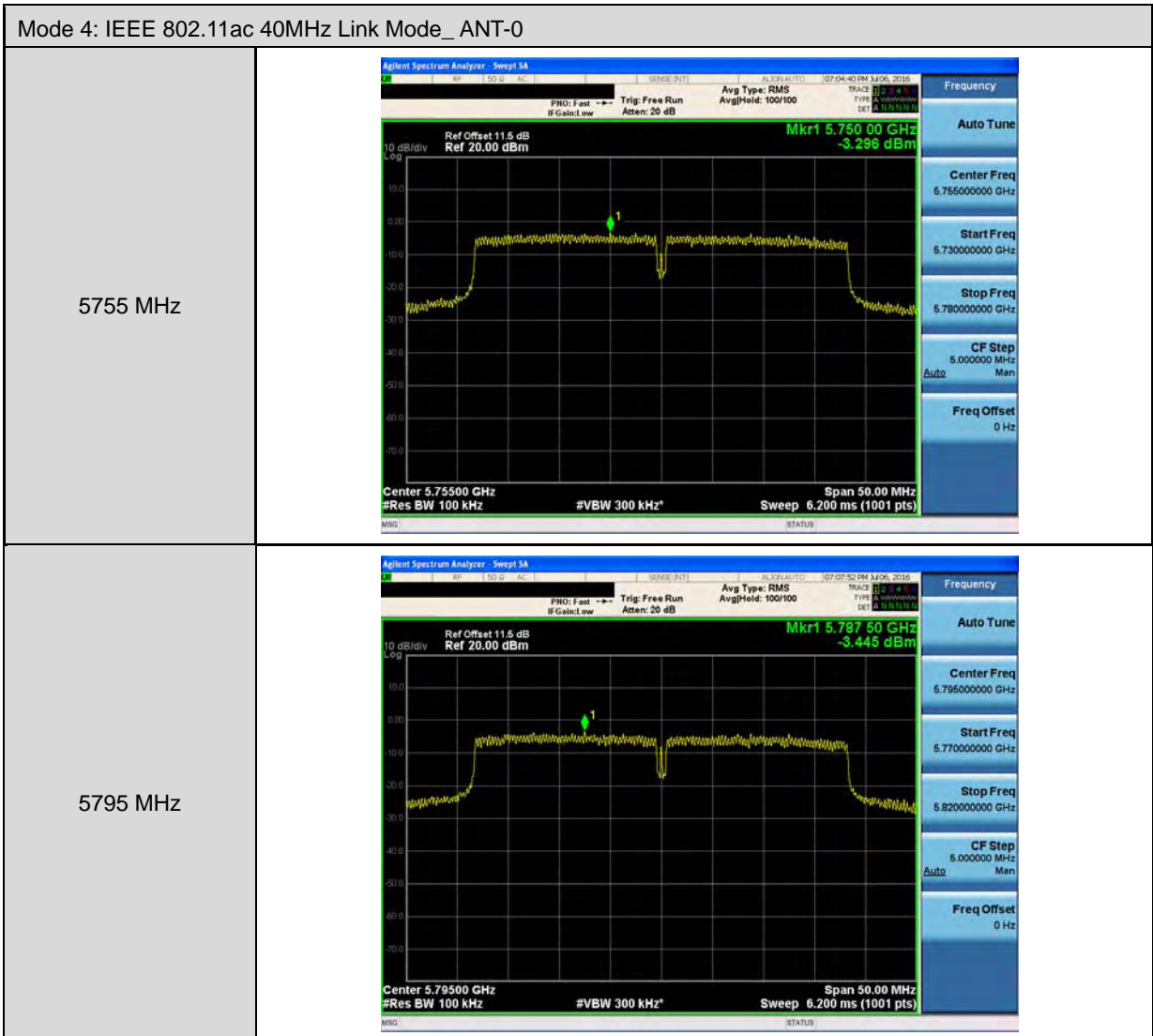


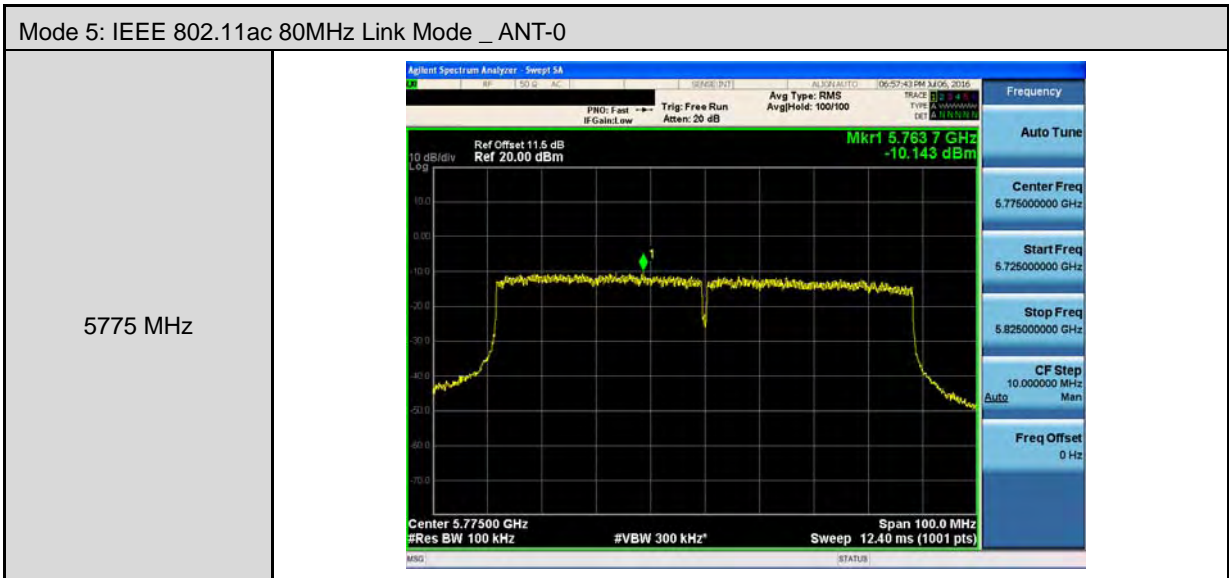
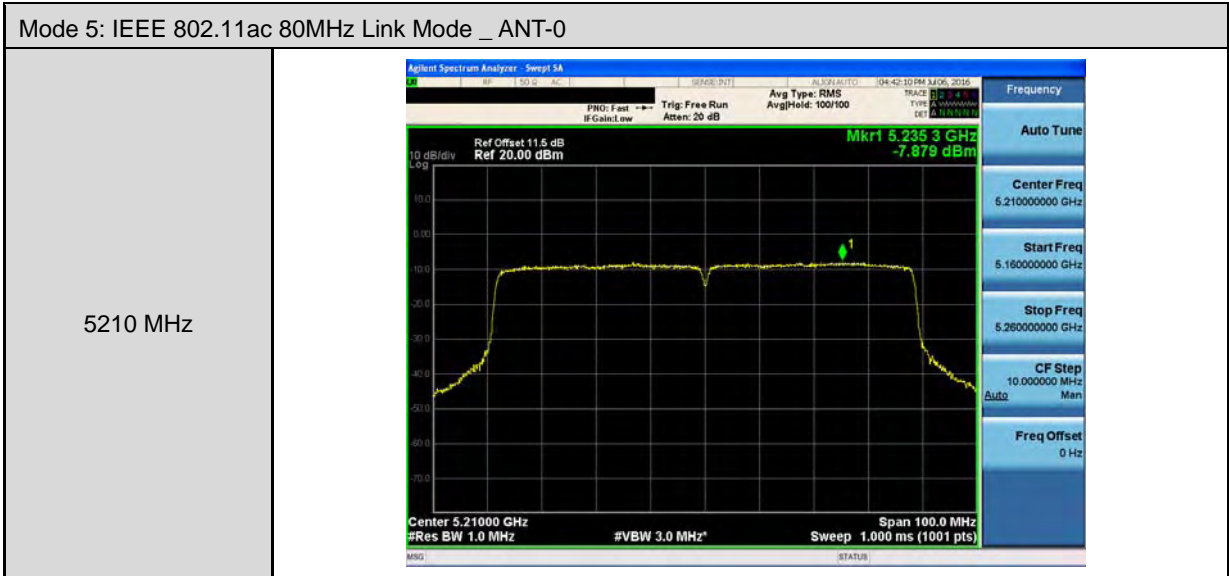
Mode 3: IEEE 802.11ac 20MHz Link Mode _ ANT-0	
5180 MHz	<p>Agilent Spectrum Analyzer: Sweep SA PNO: Fast Trig: Free Run Avg Type: RMS AvgHold: 100/100 Ref Offset 11.5 dB Ref 20.00 dBm Mkr1 5.173 96 GHz 6.210 dBm Center 5.18000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts) Span 40.00 MHz</p>
5200 MHz	<p>Agilent Spectrum Analyzer: Sweep SA PNO: Fast Trig: Free Run Avg Type: RMS AvgHold: 100/100 Ref Offset 11.5 dB Ref 20.00 dBm Mkr1 5.203 44 GHz 6.895 dBm Center 5.20000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts) Span 40.00 MHz</p>
5240 MHz	<p>Agilent Spectrum Analyzer: Sweep SA PNO: Fast Trig: Free Run Avg Type: RMS AvgHold: 100/100 Ref Offset 11.5 dB Ref 20.00 dBm Mkr1 5.233 16 GHz 6.823 dBm Center 5.24000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts) Span 40.00 MHz</p>



Mode 3: IEEE 802.11ac 20MHz Link Mode _ ANT-0	
5745 MHz	
5785 MHz	
5825 MHz	









Mode 2: IEEE 802.11a Link Mode_ ANT-1	
5180 MHz	
5200 MHz	
5240 MHz	



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



Mode 3: IEEE 802.11ac 20MHz Link Mode _ ANT-1	
5180 MHz	<p>Agilent Spectrum Analyzer: Sweep SA PNO: Fast Trig: Free Run Avg Type: RMS AvgHold: 100/100 Ref Offset 11.5 dB Ref 20.00 dBm Mkr1 5.182 00 GHz 6.737 dBm Center 5.18000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts) Span 40.00 MHz</p>
5200 MHz	<p>Agilent Spectrum Analyzer: Sweep SA PNO: Fast Trig: Free Run Avg Type: RMS AvgHold: 100/100 Ref Offset 11.5 dB Ref 20.00 dBm Mkr1 5.202 44 GHz 7.438 dBm Center 5.20000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts) Span 40.00 MHz</p>
5240 MHz	<p>Agilent Spectrum Analyzer: Sweep SA PNO: Fast Trig: Free Run Avg Type: RMS AvgHold: 100/100 Ref Offset 11.5 dB Ref 20.00 dBm Mkr1 5.243 88 GHz 7.115 dBm Center 5.24000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts) Span 40.00 MHz</p>

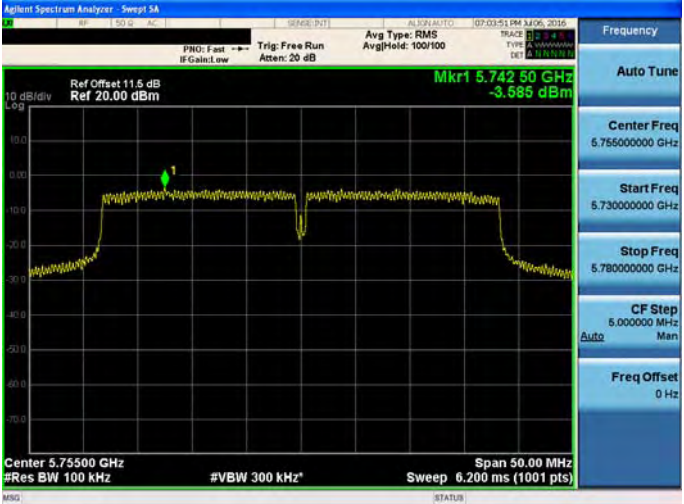



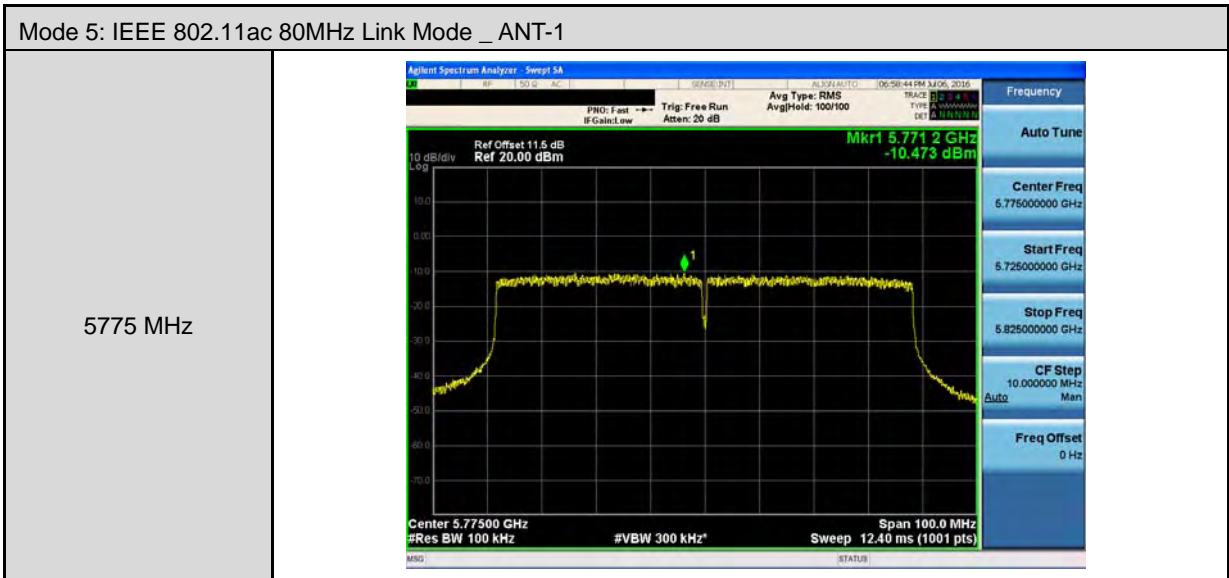
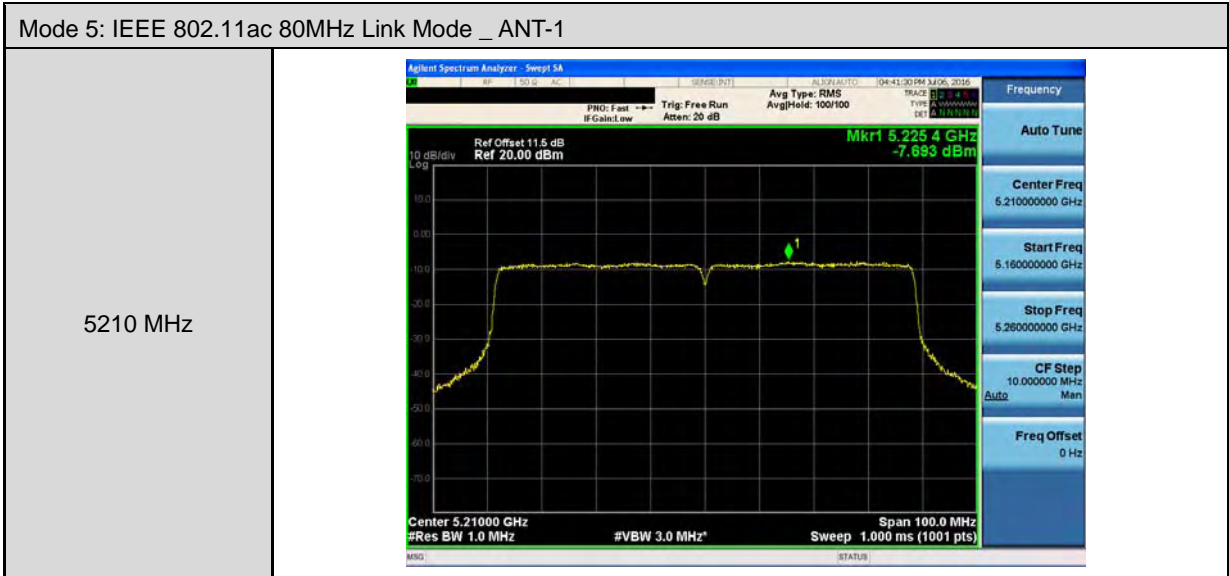
Mode 3: IEEE 802.11ac 20MHz Link Mode _ ANT-1	
5745 MHz	
5785 MHz	
5825 MHz	






Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-1	
5190 MHz	 <p>Agilent Spectrum Analyzer: Swept SA PNO: Fast Trig: Free Run Avg Type: RMS IF Gain: Low Atten: 20 dB AvgHold: 100/100 Ref Offset 11.5 dB Mkr1 5.200 44 GHz Ref 20.00 dBm -2.044 dBm Center 5.19000 GHz Span 60.00 MHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts)</p>
5230 MHz	 <p>Agilent Spectrum Analyzer: Swept SA PNO: Fast Trig: Free Run Avg Type: RMS IF Gain: Low Atten: 20 dB AvgHold: 100/100 Ref Offset 11.5 dB Mkr1 5.241 94 GHz Ref 20.00 dBm 4.180 dBm Center 5.23000 GHz Span 60.00 MHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts)</p>



Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-1	
5755 MHz	 <p>Agilent Spectrum Analyzer - Swept SA</p> <p>Ref Offset 11.5 dB Ref 20.00 dBm</p> <p>Mkr1 5.742 50 GHz -3.585 dBm</p> <p>Center 5.75500 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 6.200 ms (1001 pts)</p> <p>Frequency</p> <ul style="list-style-type: none">Auto TuneCenter Freq 5.755000000 GHzStart Freq 5.730000000 GHzStop Freq 5.780000000 GHzCF Step 5.000000 MHz (Auto/Man)Freq Offset 0 Hz
5795 MHz	 <p>Agilent Spectrum Analyzer - Swept SA</p> <p>Ref Offset 11.5 dB Ref 20.00 dBm</p> <p>Mkr1 5.786 25 GHz -3.296 dBm</p> <p>Center 5.79500 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 6.200 ms (1001 pts)</p> <p>Frequency</p> <ul style="list-style-type: none">Auto TuneCenter Freq 5.795000000 GHzStart Freq 5.770000000 GHzStop Freq 5.820000000 GHzCF Step 5.000000 MHz (Auto/Man)Freq Offset 0 Hz





Mode 2: IEEE 802.11a Link Mode_ ANT-2	
5180 MHz	
5200 MHz	
5240 MHz	



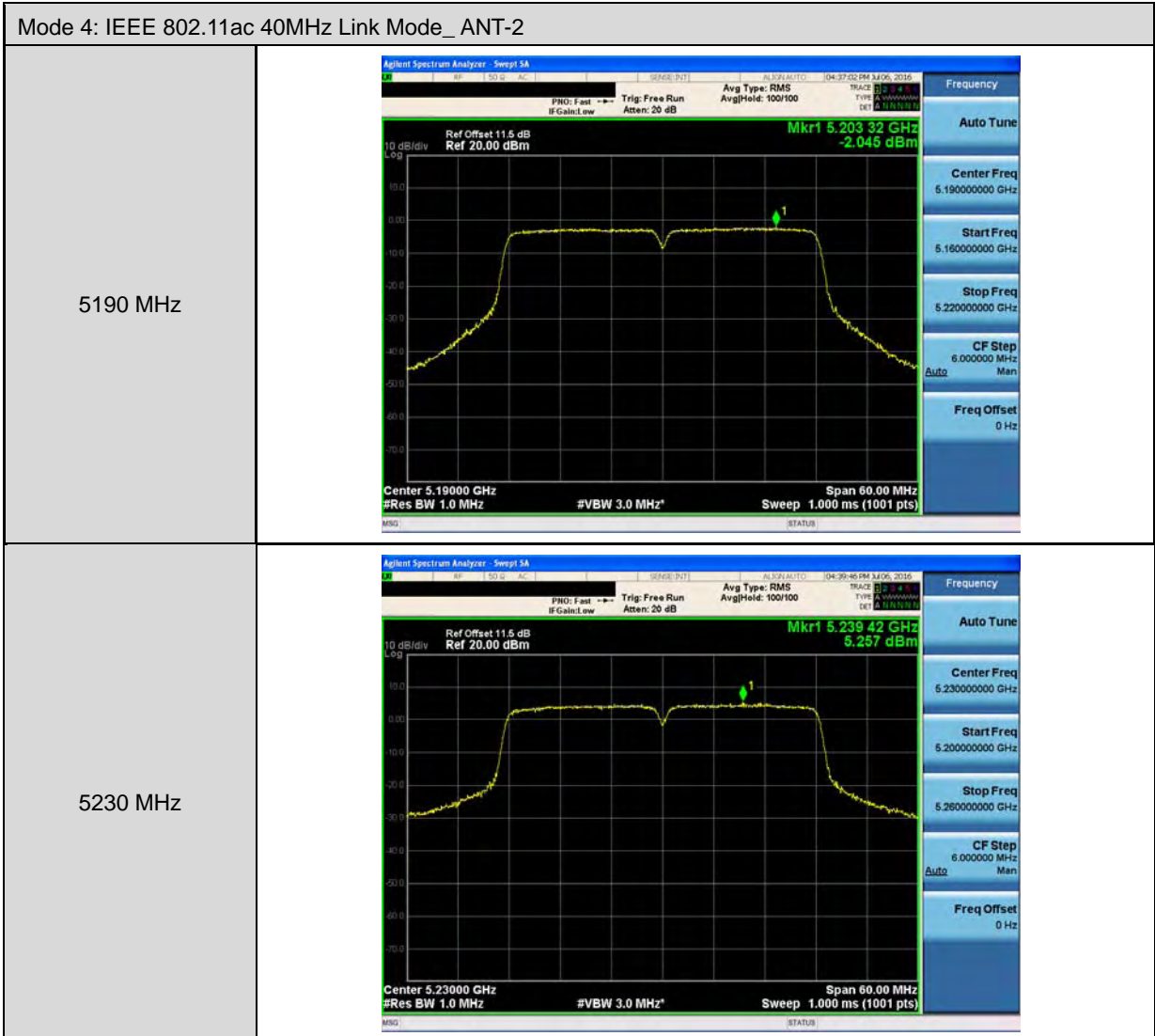
Mode 2: IEEE 802.11a Link Mode_ ANT-2	
<p>5745 MHz</p>	<p>Agilent Spectrum Analyzer: Swept SA</p> <p>Ref Offset 11.5 dB Ref 20.00 dBm</p> <p>Mkr1 5.747 52 GHz 1.289 dBm</p> <p>Center 5.74500 GHz #Res BW 100 kHz #VBW 300 kHz* Sweep 3.733 ms (1001 pts)</p> <p>Frequency: Auto Tune Center Freq: 5.74500000 GHz Start Freq: 5.73000000 GHz Stop Freq: 5.76000000 GHz CF Step: 3.000000 MHz (Auto/Man) Freq Offset: 0 Hz</p>
<p>5785 MHz</p>	<p>Agilent Spectrum Analyzer: Swept SA</p> <p>Ref Offset 11.5 dB Ref 20.00 dBm</p> <p>Mkr1 5.778 76 GHz 2.425 dBm</p> <p>Center 5.78500 GHz #Res BW 100 kHz #VBW 300 kHz* Sweep 3.733 ms (1001 pts)</p> <p>Frequency: Auto Tune Center Freq: 5.78500000 GHz Start Freq: 5.77000000 GHz Stop Freq: 5.80000000 GHz CF Step: 3.000000 MHz (Auto/Man) Freq Offset: 0 Hz</p>
<p>5825 MHz</p>	<p>Agilent Spectrum Analyzer: Swept SA</p> <p>Ref Offset 11.5 dB Ref 20.00 dBm</p> <p>Mkr1 5.832 53 GHz 1.558 dBm</p> <p>Center 5.82500 GHz #Res BW 100 kHz #VBW 300 kHz* Sweep 3.733 ms (1001 pts)</p> <p>Frequency: Auto Tune Center Freq: 5.82500000 GHz Start Freq: 5.81000000 GHz Stop Freq: 5.84000000 GHz CF Step: 3.000000 MHz (Auto/Man) Freq Offset: 0 Hz</p>



Mode 3: IEEE 802.11ac 20MHz Link Mode _ ANT-2	
5180 MHz	<p>Agilent Spectrum Analyzer: Sweep SA PNO: Fast Trig: Free Run Avg Type: RMS AvgHold: 100/100 IF Gain: Low Atten: 20 dB Ref Offset 11.5 dB Ref 20.00 dBm Mkr1 5.187 04 GHz 6.769 dBm Center 5.18000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts) Span 40.00 MHz</p>
5200 MHz	<p>Agilent Spectrum Analyzer: Sweep SA PNO: Fast Trig: Free Run Avg Type: RMS AvgHold: 100/100 IF Gain: Low Atten: 20 dB Ref Offset 11.5 dB Ref 20.00 dBm Mkr1 5.205 24 GHz 7.712 dBm Center 5.20000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts) Span 40.00 MHz</p>
5240 MHz	<p>Agilent Spectrum Analyzer: Sweep SA PNO: Fast Trig: Free Run Avg Type: RMS AvgHold: 100/100 IF Gain: Low Atten: 20 dB Ref Offset 11.5 dB Ref 20.00 dBm Mkr1 5.245 16 GHz 7.314 dBm Center 5.24000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts) Span 40.00 MHz</p>

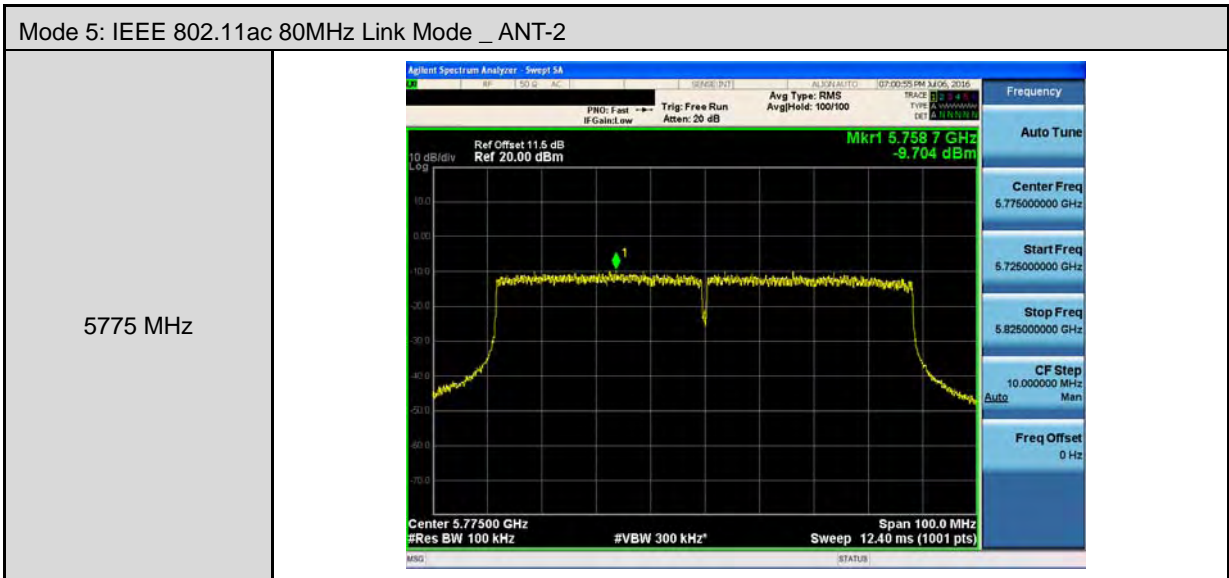
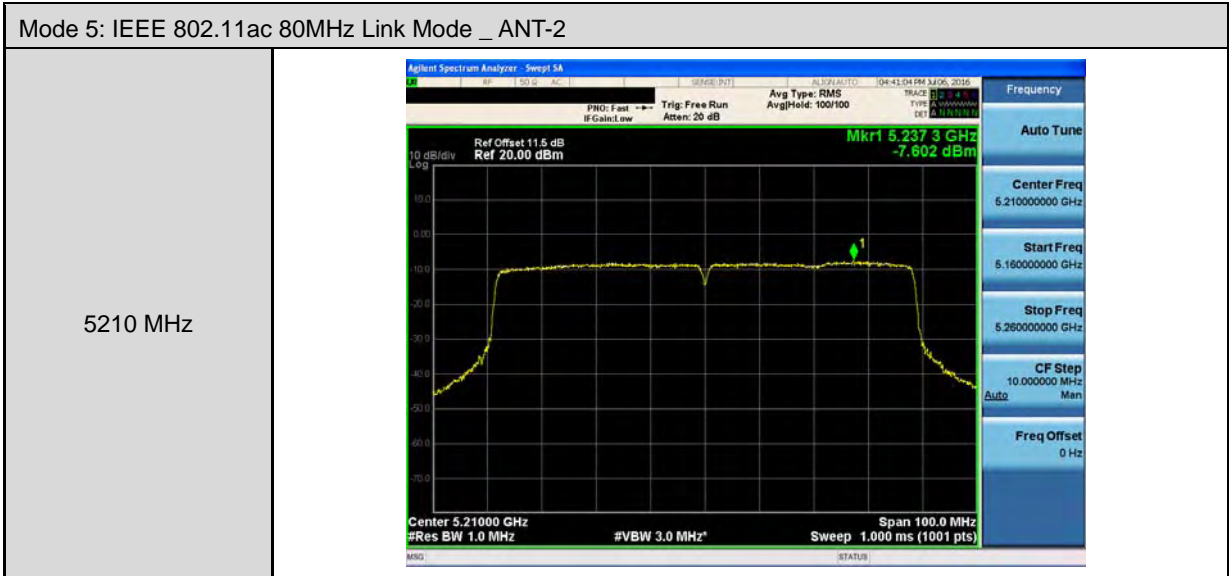


Mode 3: IEEE 802.11ac 20MHz Link Mode _ ANT-2	
5745 MHz	<p>Agilent Spectrum Analyzer: Sweep SA ALPHA:NTD: 107:11:45:594 JUN, 2016 PNO: Fast Trig: Free Run Avg Type: RMS IF Gain: Low Atten: 20 dB AvgHold: 100/100 Ref Offset 11.5 dB Mkr1 5.748 78 GHz Ref 20.00 dBm 1.248 dBm Center 5.74500 GHz Span 30.00 MHz Res BW 100 kHz #VBW 300 kHz Sweep 3.733 ms (1001 pts)</p>
5785 MHz	<p>Agilent Spectrum Analyzer: Sweep SA ALPHA:NTD: 107:15:42:594 JUN, 2016 PNO: Fast Trig: Free Run Avg Type: RMS IF Gain: Low Atten: 20 dB AvgHold: 100/100 Ref Offset 11.5 dB Mkr1 5.790 04 GHz Ref 20.00 dBm 1.695 dBm Center 5.78500 GHz Span 30.00 MHz Res BW 100 kHz #VBW 300 kHz Sweep 3.733 ms (1001 pts)</p>
5825 MHz	<p>Agilent Spectrum Analyzer: Sweep SA ALPHA:NTD: 107:16:31:594 JUN, 2016 PNO: Fast Trig: Free Run Avg Type: RMS IF Gain: Low Atten: 20 dB AvgHold: 100/100 Ref Offset 11.5 dB Mkr1 5.820 02 GHz Ref 20.00 dBm 1.446 dBm Center 5.82500 GHz Span 30.00 MHz Res BW 100 kHz #VBW 300 kHz Sweep 3.733 ms (1001 pts)</p>





Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-2	
5755 MHz	<p>Agilent Spectrum Analyzer: Swept SA</p> <p>Ref Offset 11.5 dB Ref 20.00 dBm</p> <p>Mkr1 5.748 45 GHz -3.135 dBm</p> <p>Center 5.75500 GHz #Res BW 100 kHz #VBW 300 kHz* Span 50.00 MHz Sweep 6.200 ms (1001 pts)</p>
5795 MHz	<p>Agilent Spectrum Analyzer: Swept SA</p> <p>Ref Offset 11.5 dB Ref 20.00 dBm</p> <p>Mkr1 5.790 00 GHz -2.679 dBm</p> <p>Center 5.79500 GHz #Res BW 100 kHz #VBW 300 kHz* Span 50.00 MHz Sweep 6.200 ms (1001 pts)</p>

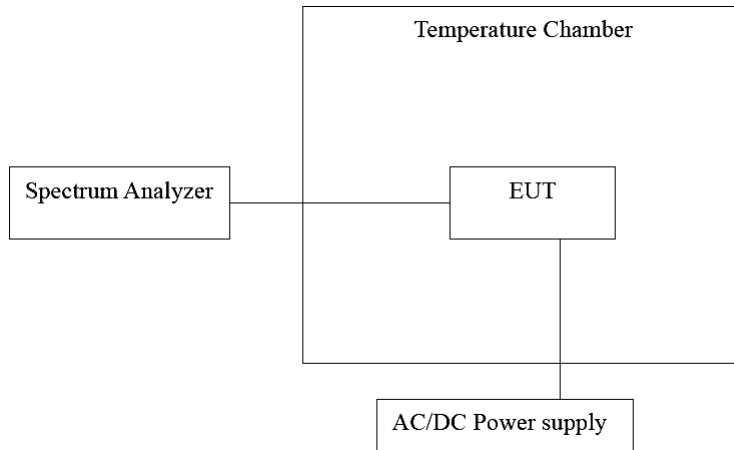


4.8. Frequency Stability Measurement

■ 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.

■ Test Setup



■ Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4408B	MY45107753	07/27/2015	1 year
Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	04/18/2016	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

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

■ Test Procedure

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



■ Test Result

Temperature Variations

Model Number	Archer C7					
Test Item	Frequency Stability					
Date of Test	07/05/2016					
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5200 MHz	0	120	5199.9987	-1300	-0.250	Pass
	10		5199.9959	-4100	-0.788	Pass
	20		5199.9958	-4200	-0.808	Pass
	30		5199.9916	-8400	-1.615	Pass
	40		5199.9952	-4800	-0.923	Pass
5785 MHz	0	120	5784.996	-4000	-0.691	Pass
	10		5784.9955	-4500	-0.778	Pass
	20		5784.9952	-4800	-0.830	Pass
	30		5784.9927	-7300	-1.262	Pass
	40		5784.9944	-5600	-0.968	Pass

Voltage Variations

Model Number	Archer C7					
Test Item	Frequency Stability					
Date of Test	07/05/2016					
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5200 MHz	20	138.00	5199.9999	-100	-0.019	Pass
		120.00	5199.9958	-4200	-0.808	Pass
		102.00	5199.9926	-7400	-1.423	Pass
5785 MHz	20	138.00	5784.9989	-1100	-0.190	Pass
		120.00	5784.9952	-4800	-0.830	Pass
		102.00	5784.9951	-4900	-0.847	Pass

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



4.9. Antenna Requirement

■ 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.

■ Antenna Connector Construction

See section 2 – antenna information.

■ Directional Gain Calculated

For Maximum Conducted Output Power

Directional Gain = $10 \cdot \log\{[10^{(G1/10)} + 10^{(G2/10)} + \dots + 10^{(Gn/10)}] / NANT\}$ dBi

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

For Peak Power Spectral Density

Directional Gain = $10 \cdot \log\{[10^{(G1/20)} + 10^{(G2/20)} + \dots + 10^{(Gn/20)}]^2 / NANT\}$

Operate Freq. Band	Directional Gain (dBi)
IEEE 802.11a	9.77
IEEE 802.11ac 20MHz	9.77
IEEE 802.11ac 40MHz	9.77
IEEE 802.11ac 80MHz	9.77