REPORT No.: SZ16020033W12

FCC RF TEST REPORT

APPLICANT	:	F-Secure Corporation
PRODUCT NAME	:	Router
MODEL NAME	:	FSEC-SE161
TRADE NAME	:	F-Secure
BRAND NAME	:	F-Secure
FCC ID	:	2AGD5-FSECSE161
STANDARD(S)	:	47 CFR Part 15 Subpart E
ISSUE DATE	:	2016-11-07

SHENZHEN MORLAB COMMUNICATIONS TECHNOLOGY Co., Ltd.

NOTE: This document is issued by MORLAB, the test report shall not be reproduced except in full without prior written permission of the company. The test results apply only to the particular sample(s) tested and to the specific tests carried out which is available on request for validation and information confirmed at our website.

MORLAB GROUP
FL1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block67, BaoAn District, ShenZhen , GuangDong Province, P. R. China
Tel: 86-755-36698555 Http://www.morlab.com
Fax: 86-755-36698525 E-mail: service@morlab.cn

DIRECTORY

Change History		
Issue	Date	Reason for change
1.0	2016-11-07	First edition

TEST REPORT DECLARATION

Applicant	F-Secure Corporation
Applicant Address	Tammasaarenkatu 7, P.O. Box 24, 00181 Helsinki, Finland
Manufacturer	SHENZHEN SKYWORTH DIGITAL TECHNOLOGY CO.,LTD.
Manufacturer Address	Unit A 13/F Skyworth Bldg, Gaoxin Ave.1 S.,Nanshan District, Shenzhen, China.
Product Name	Router
Model Name	FSEC-SE161
Brand Name	F-Secure
HW Version	5800-2ARF10
SW Version	1.7.2.10
Test Standards	47 CFR Part 15 Subpart E
Test Date	2016-03-03 to 2016-10-17
Test Result	PASS

Tested by : Zou Jian

Zou Jian

Reviewed by : Qiu Xiaojun

Qiu Xiaojun

Approved by : Peng Huarui

Peng Huarui

1. GENERAL INFORMATION

1.1 EUT Description

EUT Type .....:	Router
Serial No. .....:	(n.a, marked #1 by test site)
Hardware Version.....:	5800-2ARF10
Software Version.....:	1.7.2.10
Applicant .....:	F-Secure Corporation Tammasaarenkatu 7, P.O. Box 24, 00181 Helsinki, Finland
Manufacturer .....:	SHENZHEN SKYWORTH DIGITAL TECHNOLOGY CO.,LTD. Unit A 13/F Skyworth Bldg, Gaoxin Ave.1 S., Nanshan District, Shenzhen, China.
Frequency Range.....:	802.11b/g/n: 2.400GHz - 2.4835GHz 802.11a/ac/n: 5.150GHz- 5.250GHz 5.725GHz- 5.850GHz
Channel Number .....:	Refer Note 3
Modulation Type.....:	DSSS, OFDM
Antenna Type .....:	PCB Antenna
Antenna Gain.....:	ANT 1/ANT 2/ANT 3: 3.0dBi MAX(2.4GHz); ANT 1/ANT 2/ANT 3: 2.6dBi MAX(5GHz);
Directional Gain .....:	7.37dBi **Note 2**

Note:

1. The U-NII band is applicable to this report, another bands of operation (2.4GHz) is documented in a separate report.
2. The EUT has 4 antennas, which are 3 main antennas and 1 auxiliary antenna, the EUT incorporates a MIMO function. Physically, the EUT provides three TX antennas and four Rx antennas (3T4R) for 5GHz band. And the auxiliary antenna only Rx.

Operation Mode / Tx Mode	1Tx	3Tx
802.11 a	ANT1 or ANT2 or ANT3	
802.11 ac		ANT1 & ANT2 & ANT3
802.11 n		ANT1 & ANT2 & ANT3

According to KDB 662911 D01, the directional gain = G_{ANT} +10log(N_{ANT}) dBi, where G_{ANT} is the antenna gain in dBi, N_{ANT} is the number of outputs.

3. The following tables are the channel number and frequency of the EUT, the black bold channels were selected for test.

20MHz Bandwidth:

Frequency Range	5150~5250MHz				5725~5850MHz				
Channel Number	**36**	40	**44**	**48**	**149**	153	**157**	161	**165**
Frequency (MHz)	**5180**	5200	**5220**	**5240**	**5745**	5765	**5785**	5805	**5825**

40MHz Bandwidth:

Frequency Range	5150~5250 MHz		5725~5850 MHz	
Channel Number	**38**	**46**	**151**	**159**
Frequency (MHz)	**5190**	**5230**	**5755**	**5795**

80MHz Bandwidth:

Frequency Range	5150~5250MHz	5725~5850MHz
Channel Number	**42**	**155**
Frequency (MHz)	**5210**	**5775**

4. During test, the duty cycle of the EUT was setting to 100%.
5. The EUT connected to the serial port of the computer with a serial communication cable, and then use the dedicated software to control the EUT into the test mode. In the software, there are Dev, Channel, Bandwidth, Power Index, Test Setting, Ant and Date setting items. According to these setting items, we can control wifi different frequency, rate, power, bandwidth to transmit. For example, we can set 5GHz band or 2.4GHz band in the Dev setting item, set different transmit antenna in the Ant setting item, set different rate in the Date setting item, set Packets Tx or Continuous transmission in the Test Setting item. We set power level of wifi in the Power Index setting item, and as follows, setting table of power level.

Mode	802.11a	802.11n	802.11ac
Power Index	20	20	20

6. All different rates of wifi were pre-tested, and only the worest case was tested and recorded in the report. For example, 6Mbps of 802.11a, 6.5Mbps of 802.11ac20, 13.5Mbps of 802.11ac40, 29.3Mbps of 802.11ac80, 6.5Mbps of 802.11n20 and 13.5Mbps of 802.11n40 were tested and recorded in the report.
7. For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.
8. The antenna connector of EUT is designed with permanent attachment and no consideration of replacement.

1.2 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart E (UNII band) for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 15 (11-16-16 Edition)	Radio Frequency Devices

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result
1	15.203	Antenna Requirement	**PASS**
2	15.407(a) (e)	Emission Bandwidth	**PASS**
3	15.407(a)	Maximum conducted output Power	**PASS**
4	15.407(a)	Peak Power spectral density	**PASS**
5	15.407(b)	Restricted Frequency Bands	**PASS**
6	15.407(g)	Frequency Stability	**PASS**
7	15.207	Conducted Emission	**PASS**
8	15.407(b)	Radiated Emission	**PASS**

The tests of Conducted Emission and Radiated Emission were performed according to the method of measurements prescribed in ANSI C63.10 2013.

These RF tests were performed according to the method of measurements prescribed in KDB789033 D02 v01r02 (08/04/2016).

1.3 Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15 - 35
Relative Humidity (%):	30 -60
Atmospheric Pressure (kPa):	86-106

2. 47 CFR PART 15E REQUIREMENTS

2.1 Antenna requirement

2.1.1 Applicable Standard

According to FCC 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

2.1.2 Result: Compliant

The EUT has a permanently and irreplaceable attached antenna. Please refer to the EUT internal photos.

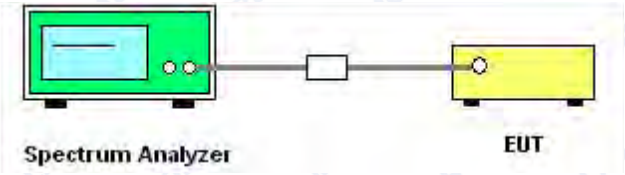
2.2 Emission Bandwidth

2.2.1 Requirement

For purposes of this subpart the emission bandwidth shall be determined by measuring the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, that are 26 dB down relative to the maximum level of the modulated carrier. Determination of the emissions bandwidth is based on the use of measurement instrumentation employing a peak detector function with an instrument resolution bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement. Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

2.2.2 Test Description

A. Test Set:



The EUT which is powered by the adapter, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

B. Test Procedure

1. KDB 789033 Section C) 1) Emission Bandwidth was used in order to prove compliance

1) Set RBW = approximately 1% of the emission bandwidth.

2) Set the VBW > RBW.

3) Detector = Peak.

4) Trace mode = max hold.

5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

2. KDB 789033 Section C) 2) minimum emission bandwidth for the band 5.725-5.85GHz was used in order to prove compliance.

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.715-5.85 GHz. The following procedure shall be used for measuring this bandwidth:

a) Set RBW = 100 kHz.

b) Set the video bandwidth (VBW) ≥ 3 × RBW.

c) Detector = Peak.

d) Trace mode = max hold.

e) Sweep = auto couple.

f) Allow the trace to stabilize.

g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

2.2.3 Test Result

The lowest, middle and highest channels are selected to perform testing to record the 26 dB bandwidth of the EUT.

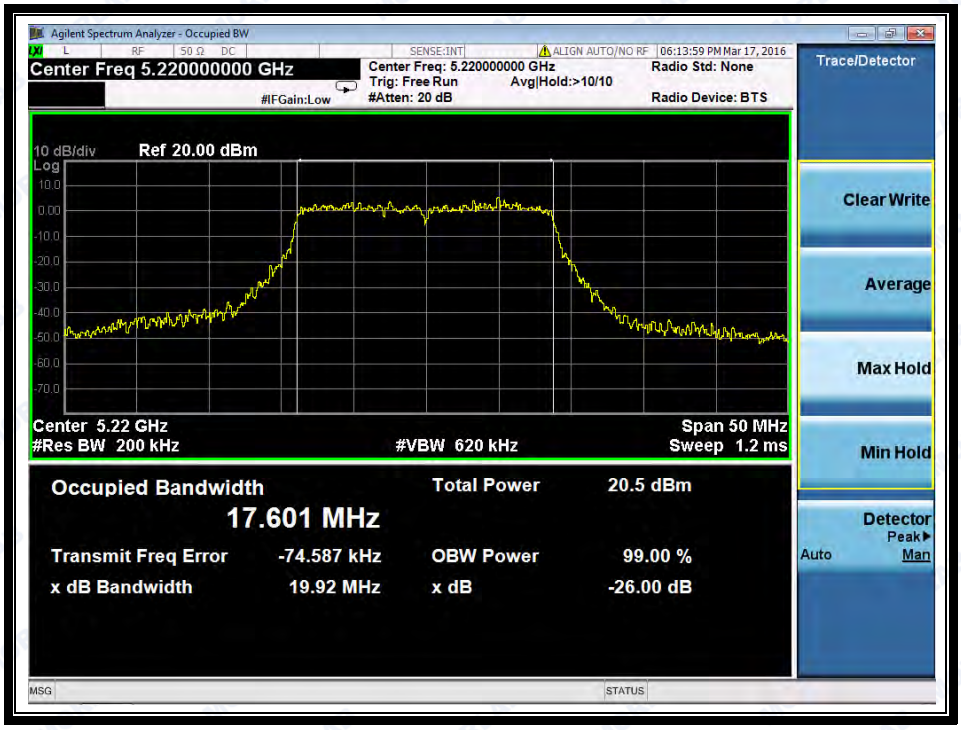
2.2.3.1 802.11ac-20MHz Test mode

A. Test Verdict:

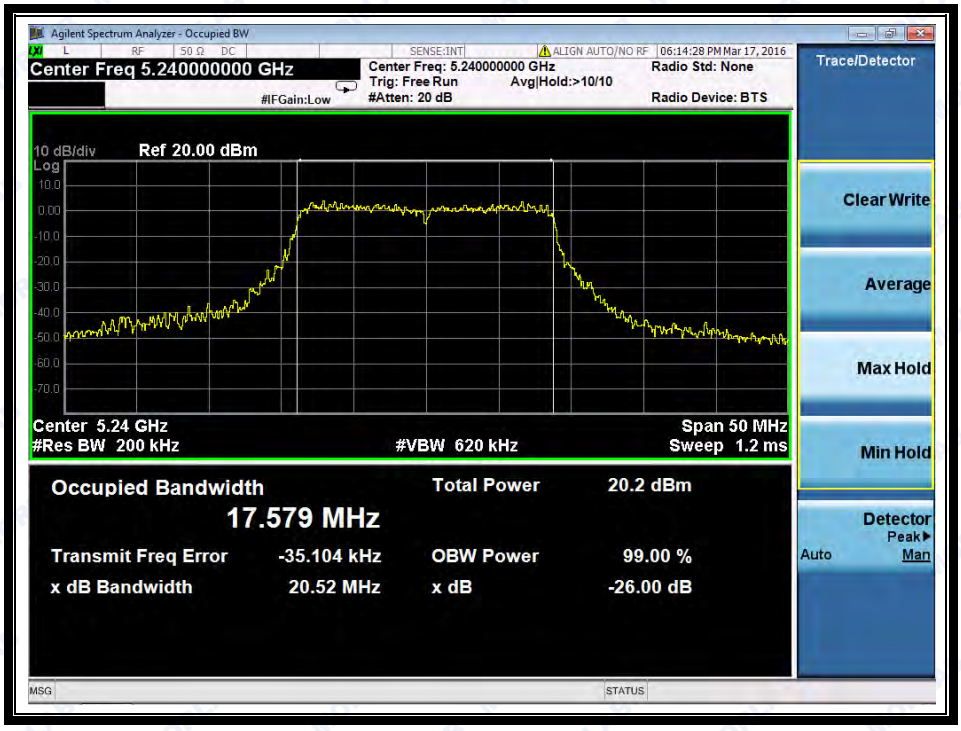
Channel	Frequency (MHz)	26 dB Bandwidth (MHz) ANT1	26 dB Bandwidth (MHz) ANT 2	26 dB Bandwidth (MHz) ANT 3
36	5180	20.48	20.85	20.54
44	5220	19.92	20.58	20.12
48	5240	20.52	20.05	20.56
Channel	Frequency (MHz)	6dB Bandwidth (MHz) ANT1	6dB Bandwidth (MHz) ANT 2	6dB Bandwidth (MHz) ANT 3
149	5745	17.56	17.68	16.38
157	5785	16.72	17.18	17.61
165	5825	16.73	17.60	17.62

B. Test Plots

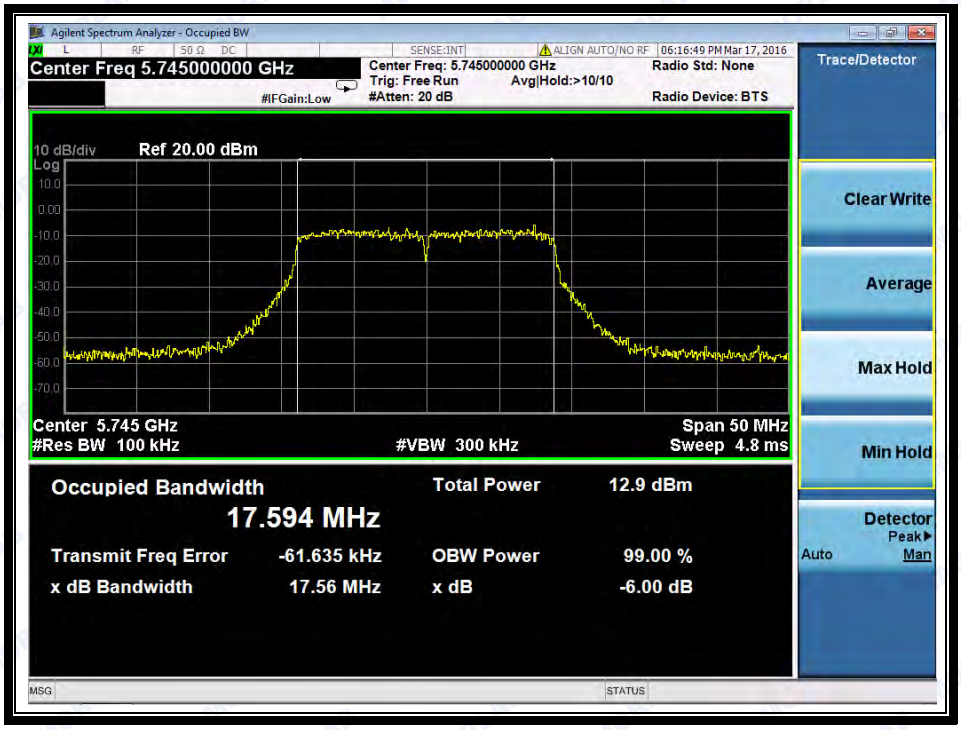
(Channel 36: 5180MHz @ 802.11ac Antenna 1)



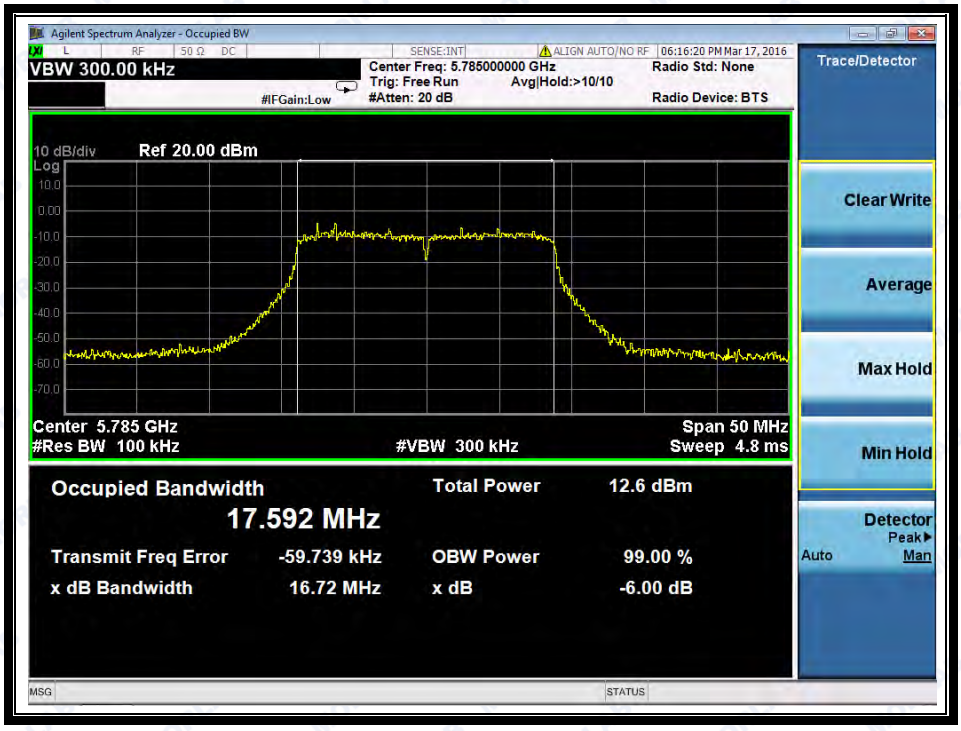
(Channel 44: 5220 MHz @ 802.11ac Antenna 1)



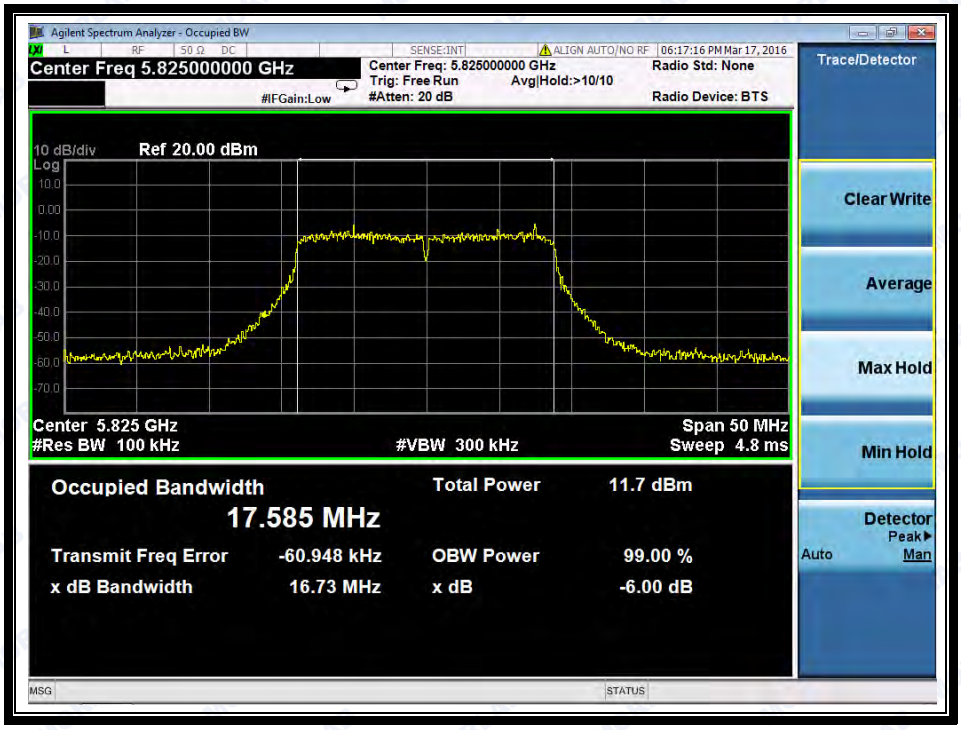
(Channel 48: 5240MHz @ 802.11ac Antenna 1)



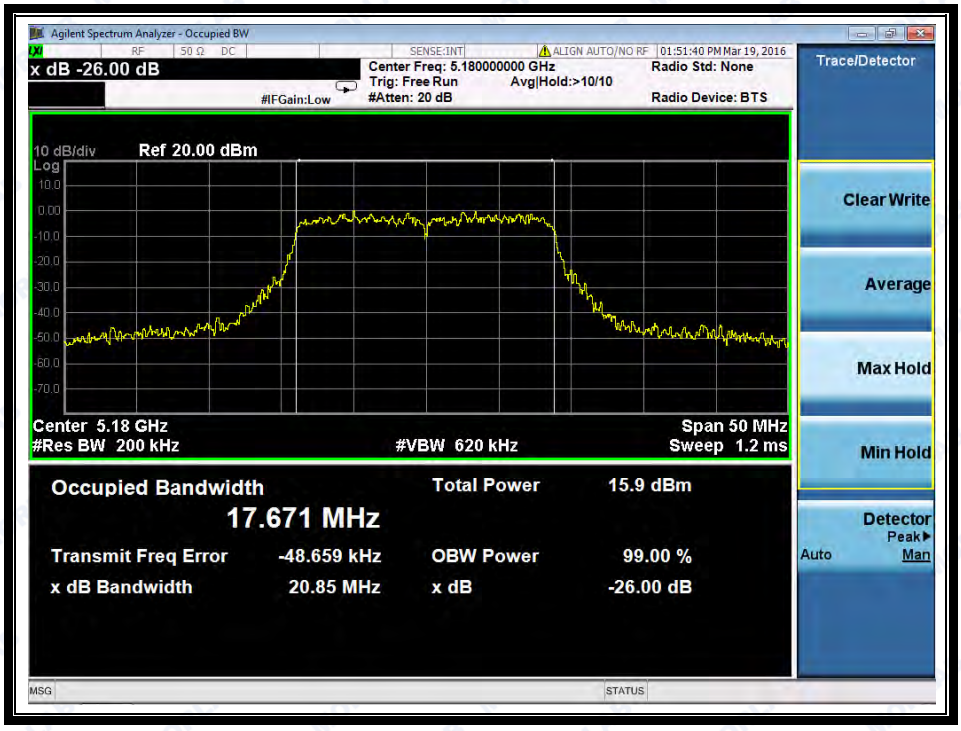
(Channel 149: 5745MHz @ 802.11ac Antenna 1)



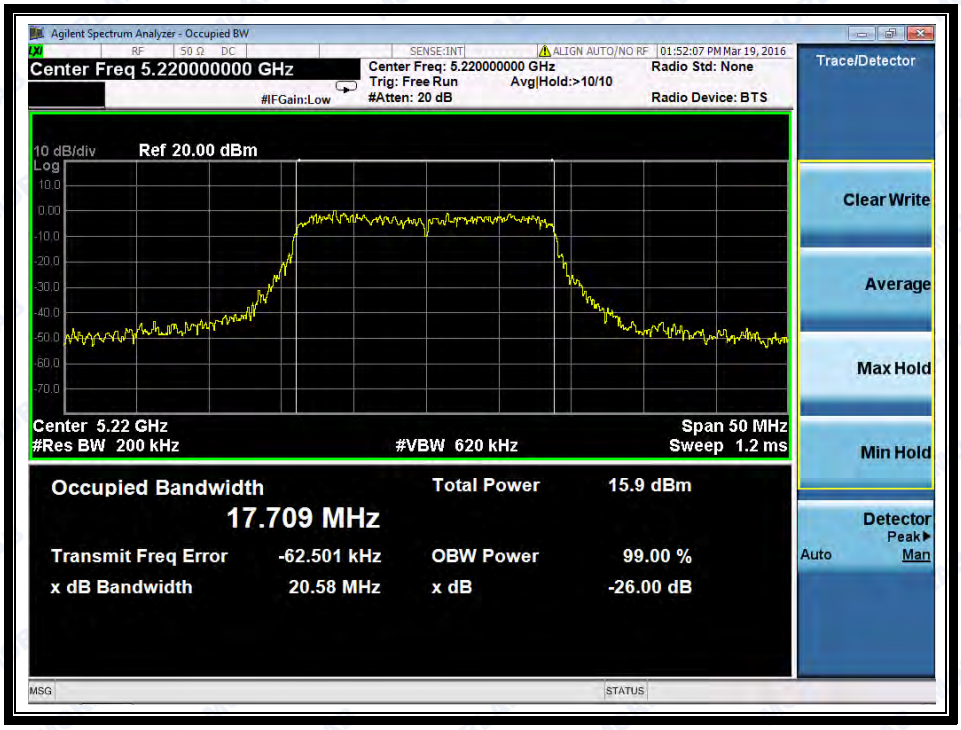
(Channel 157: 5785MHz @ 802.11ac Antenna 1)



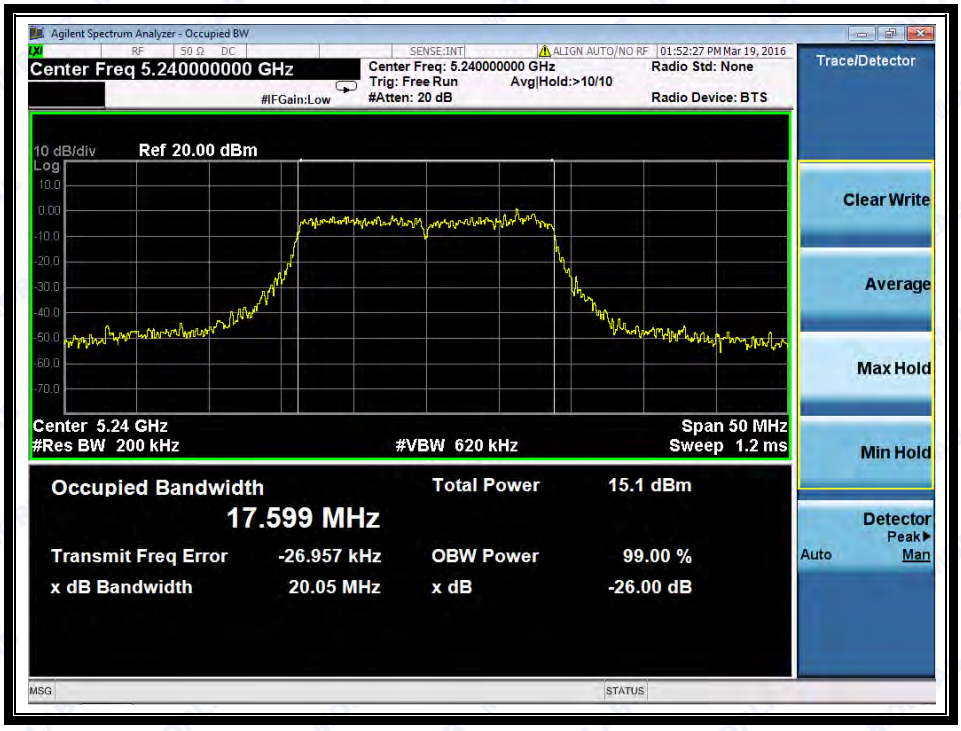
(Channel 165: 5825MHz @ 802.11ac Antenna 1)



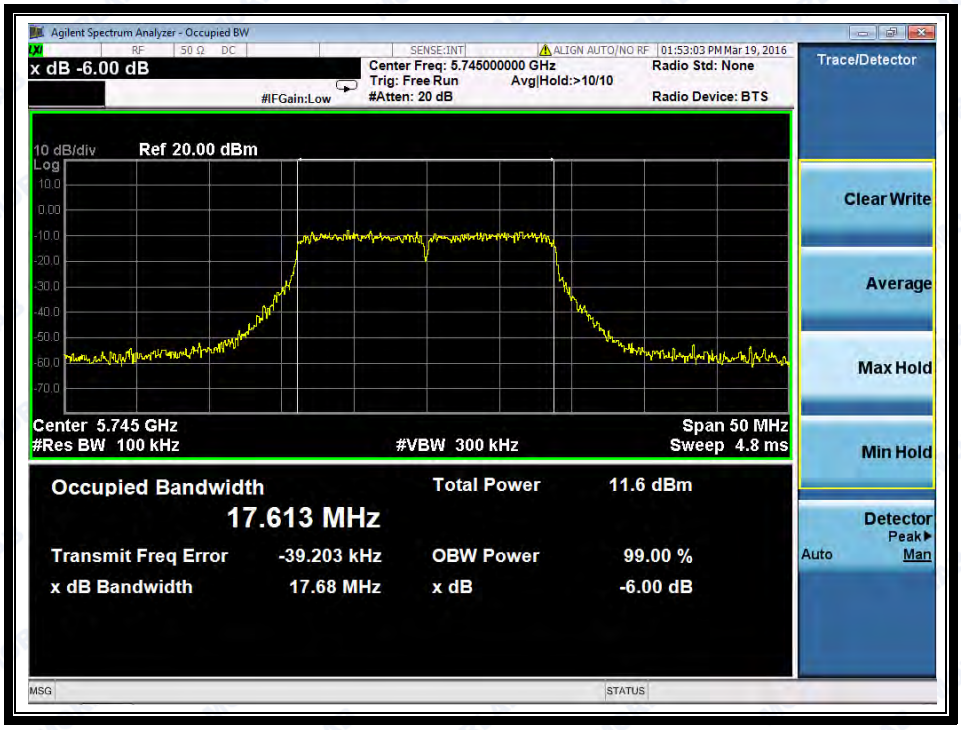
(Channel 36: 5180MHz @ 802.11ac Antenna 2)



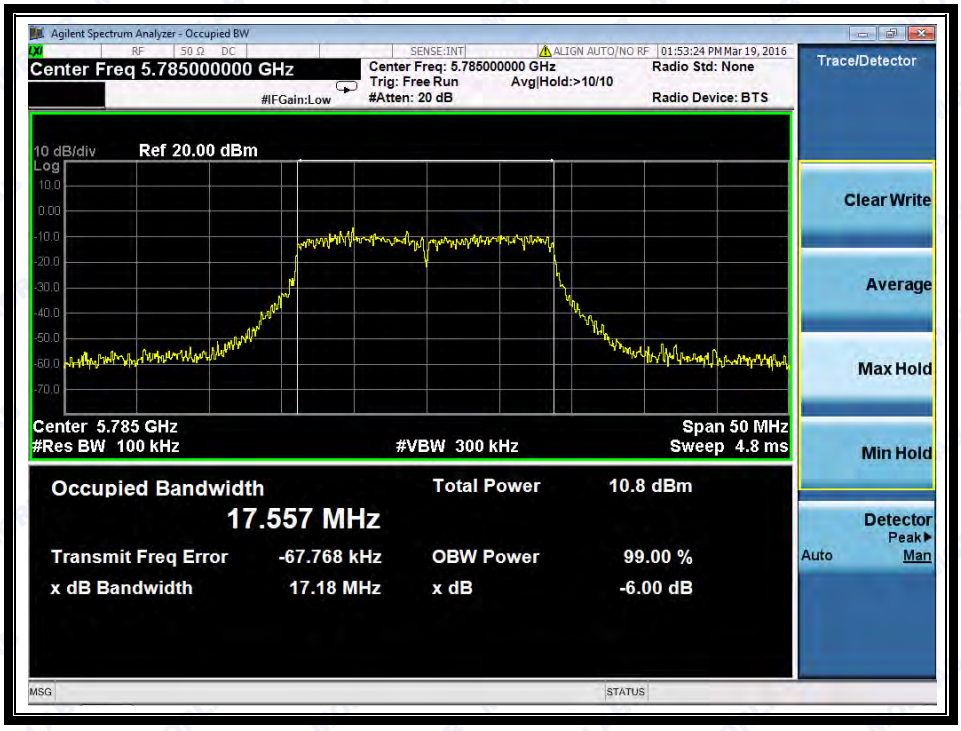
(Channel 44: 5220 MHz @ 802.11ac Antenna 2)



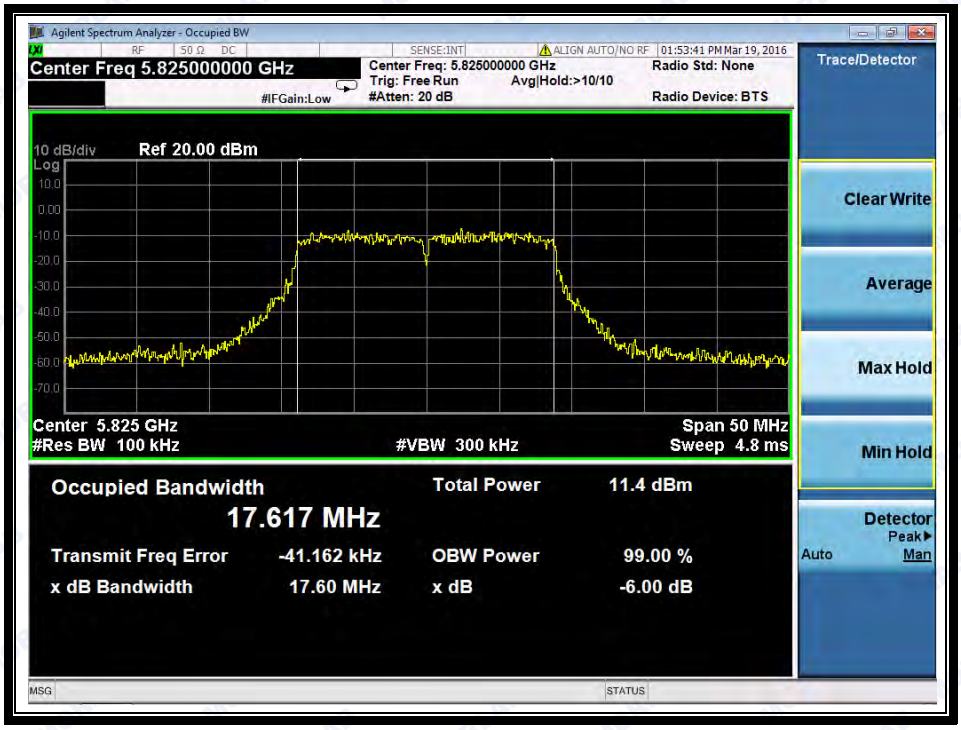
(Channel 48: 5240MHz @ 802.11ac Antenna 2)



(Channel 149: 5745MHz @ 802.11ac Antenna 2)

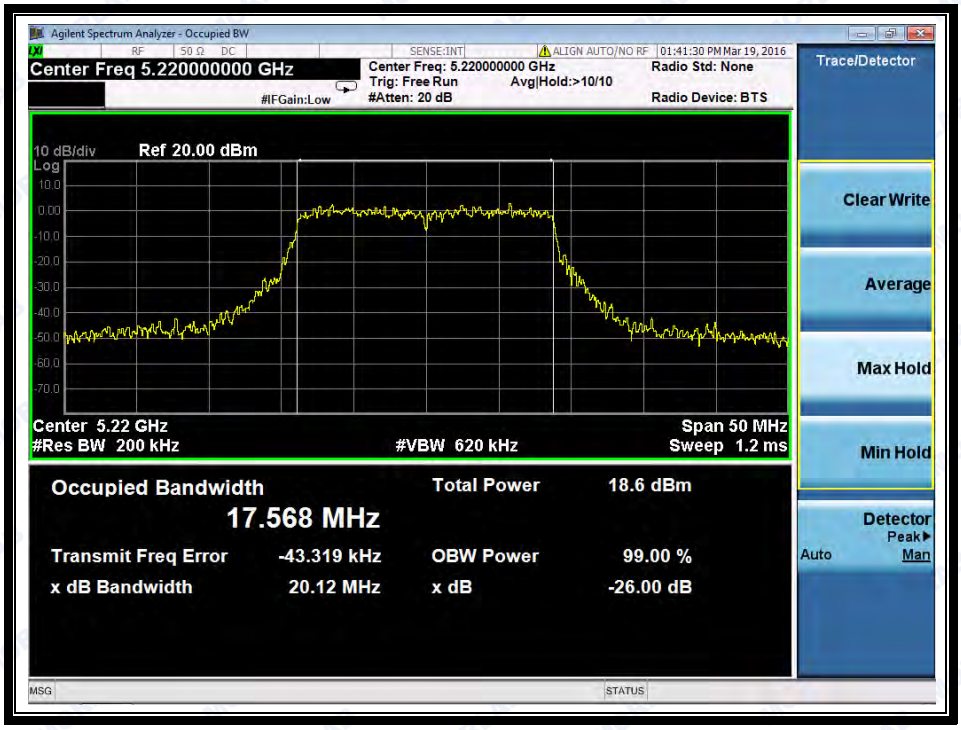


(Channel 157: 5785MHz @ 802.11ac Antenna 2)

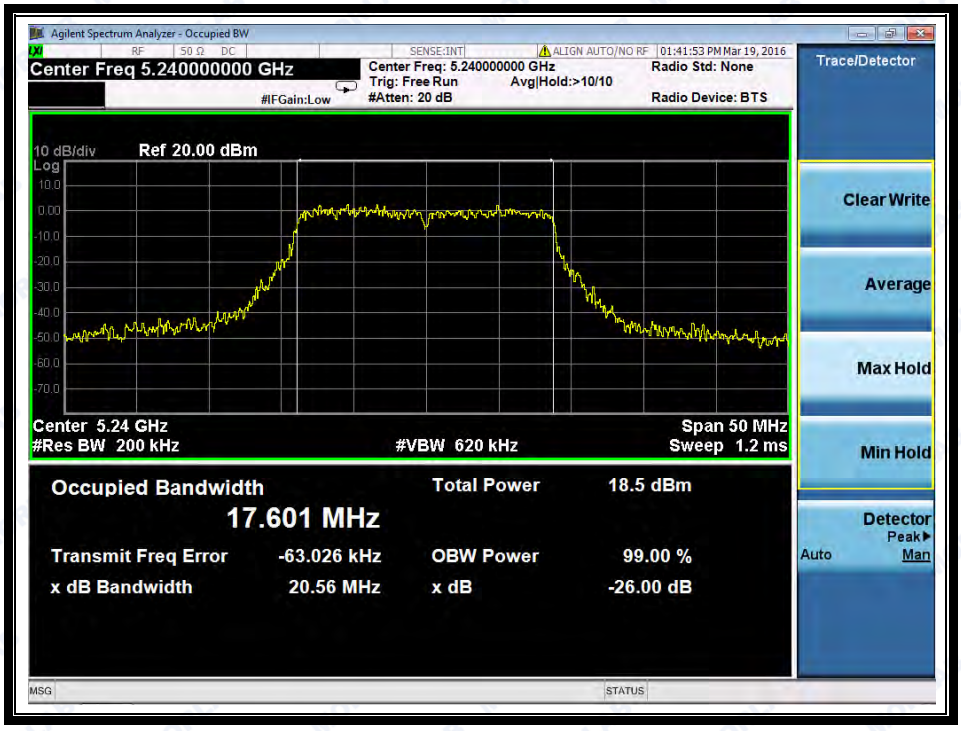


(Channel 165: 5825MHz @ 802.11ac Antenna 2)

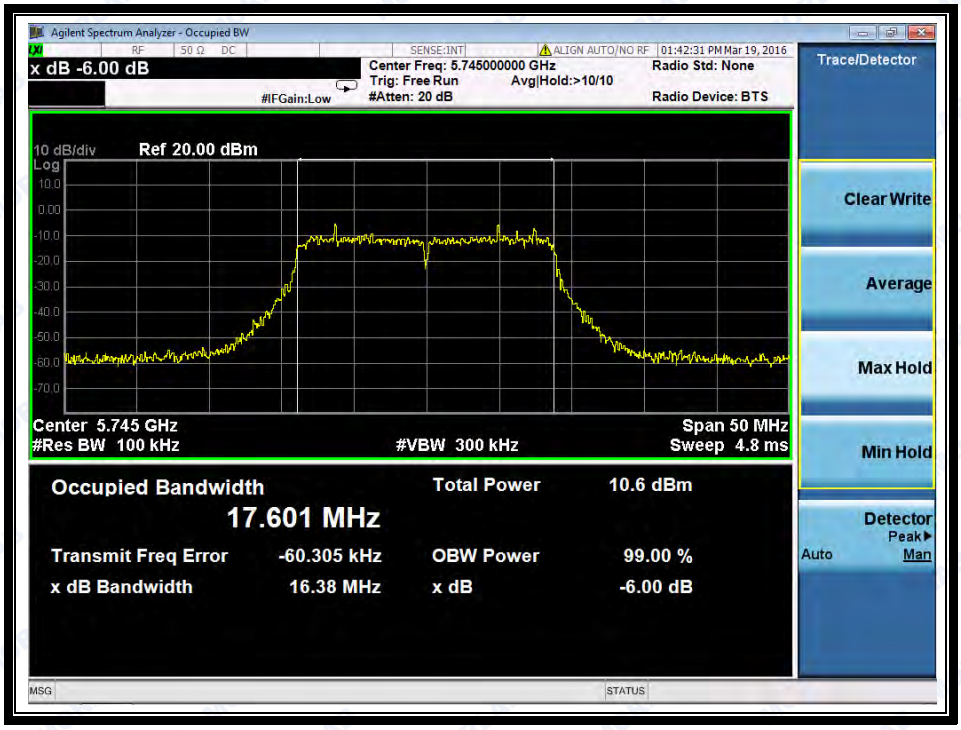
(Channel 36: 5180MHz @ 802.11ac Antenna 3)



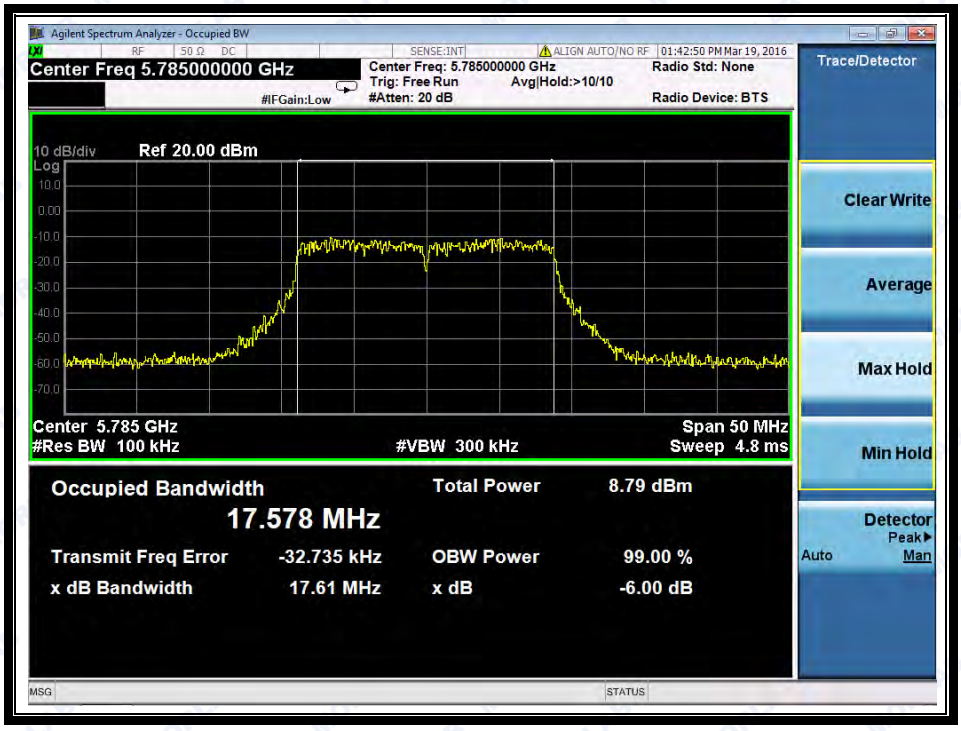
(Channel 44: 5220 MHz @ 802.11ac Antenna 3)



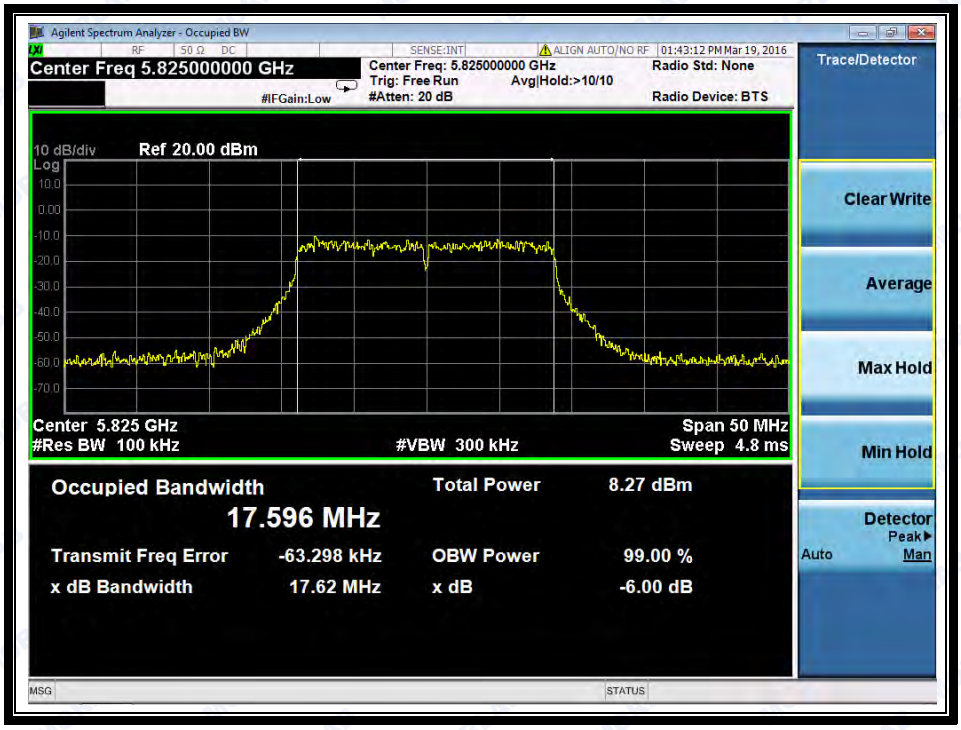
(Channel 48: 5240MHz @ 802.11ac Antenna 3)



(Channel 149: 5745MHz @ 802.11ac Antenna 3)



(Channel 157: 5785MHz @ 802.11ac Antenna 3)



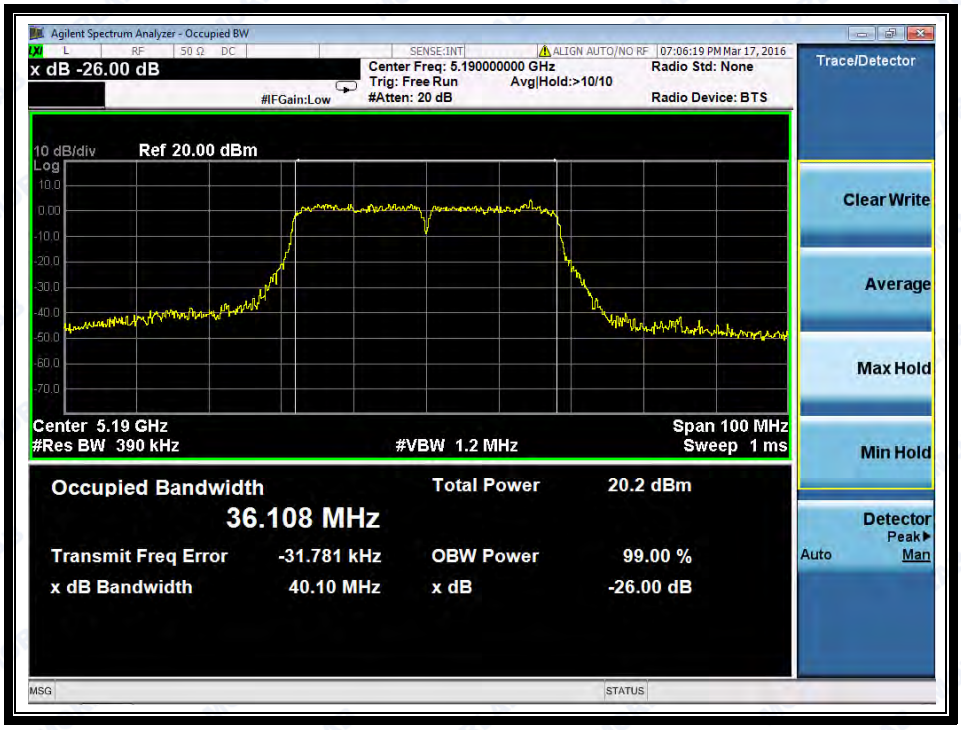
(Channel 165: 5825MHz @ 802.11ac Antenna 3)

2.2.3.2 802.11ac-40MHz Test mode

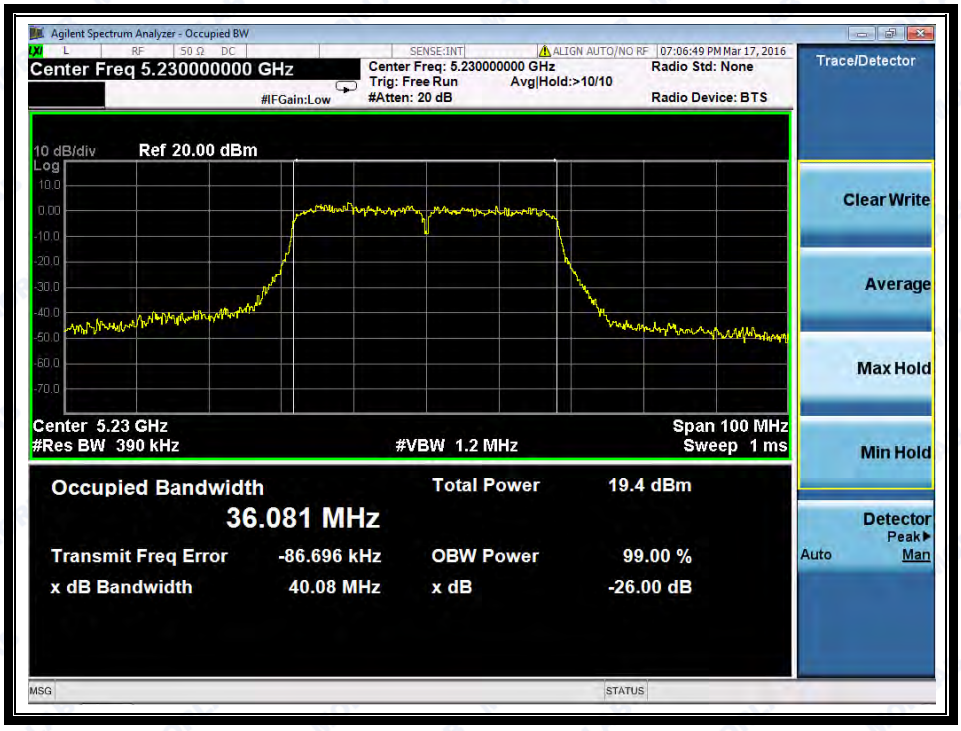
A. Test Verdict:

Channel	Frequency (MHz)	26 dB Bandwidth (MHz) ANT 1	26 dB Bandwidth (MHz) ANT 2	26 dB Bandwidth (MHz) ANT 3
38	5190	40.10	40.91	40.98
46	5230	40.08	40.16	40.91
Channel	Frequency (MHz)	6dB Bandwidth (MHz) ANT 1	6dB Bandwidth (MHz) ANT 2	6dB Bandwidth (MHz) ANT 3
151	5755	35.59	35.59	35.27
159	5795	35.91	35.58	33.44

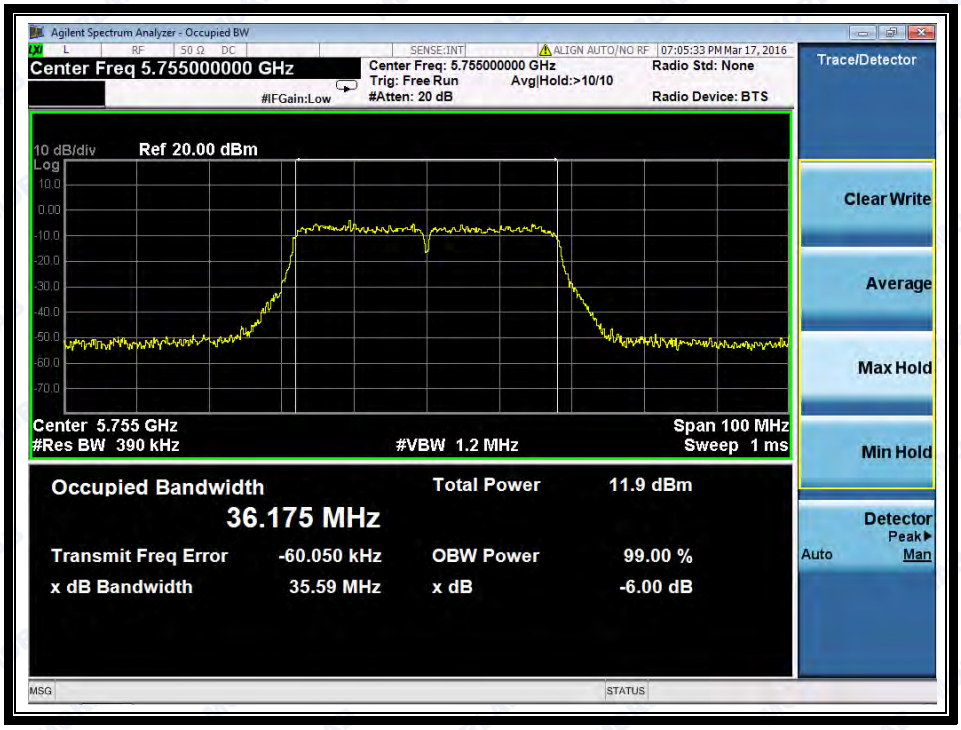
B. Test Plots



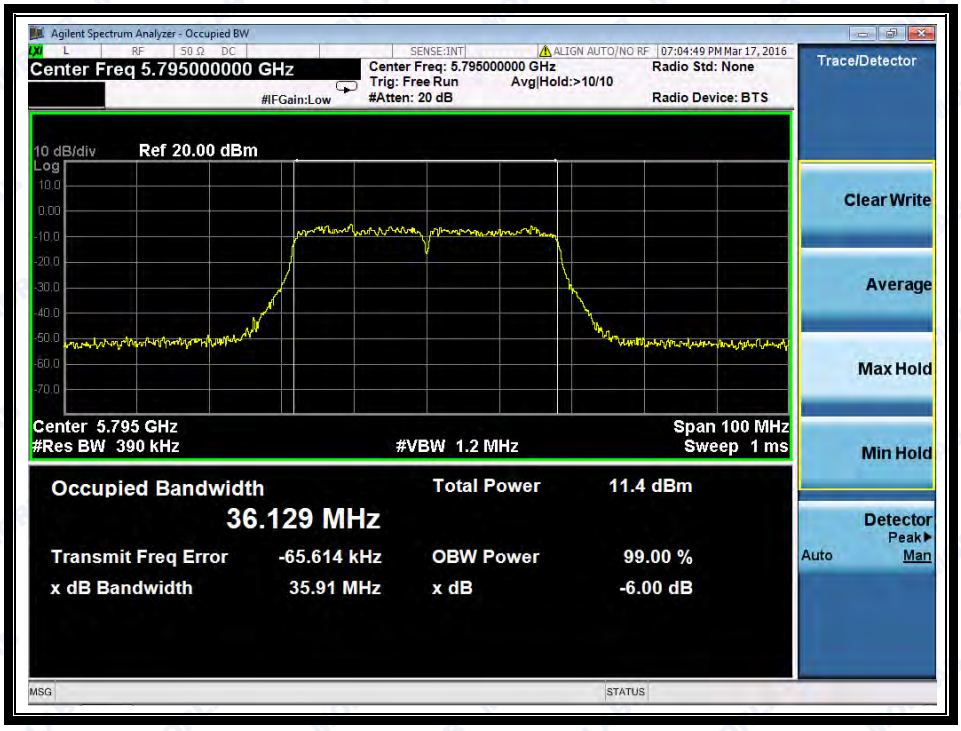
(Channel 38: 5190MHz @ 802.11ac Antenna 1)



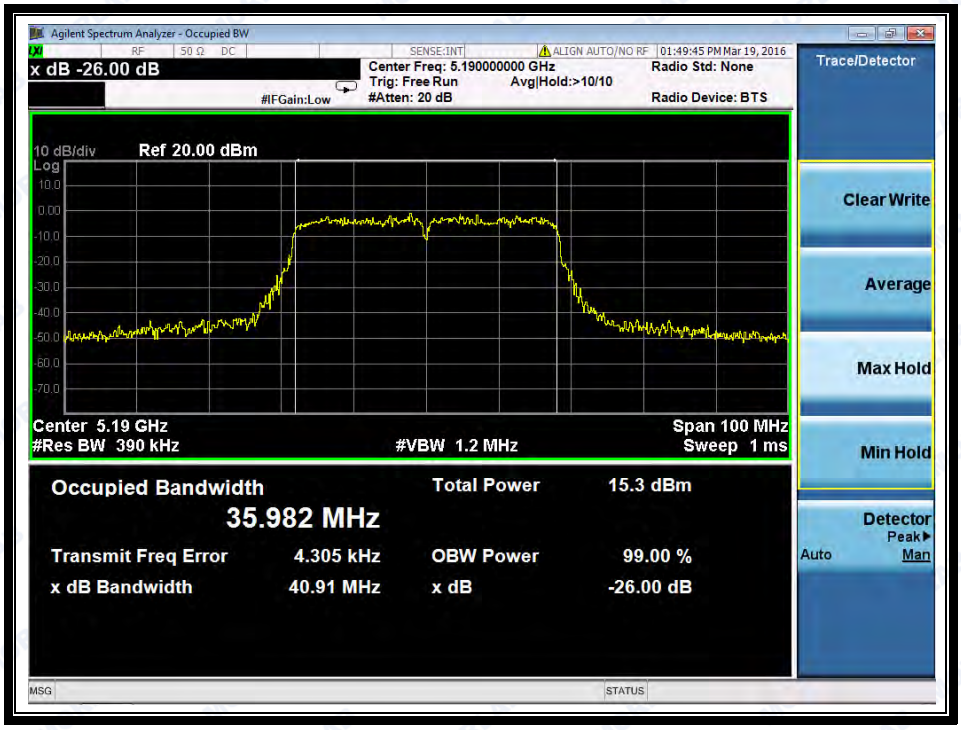
(Channel 46: 5230 MHz @ 802.11ac Antenna 1)



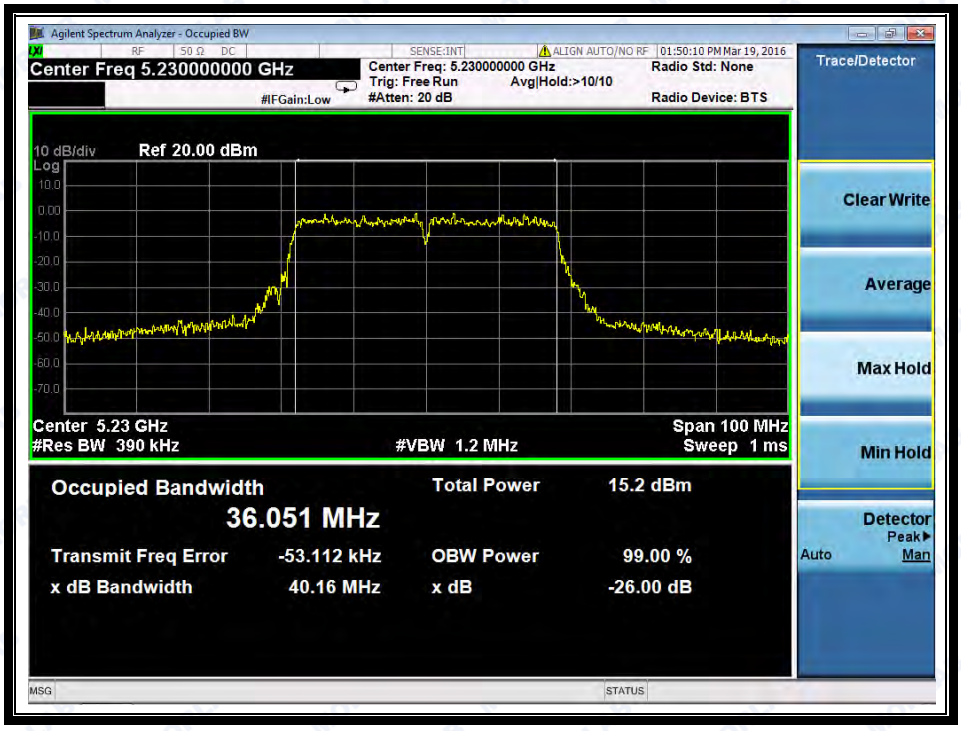
(Channel 151: 5755MHz @ 802.11ac Antenna 1)



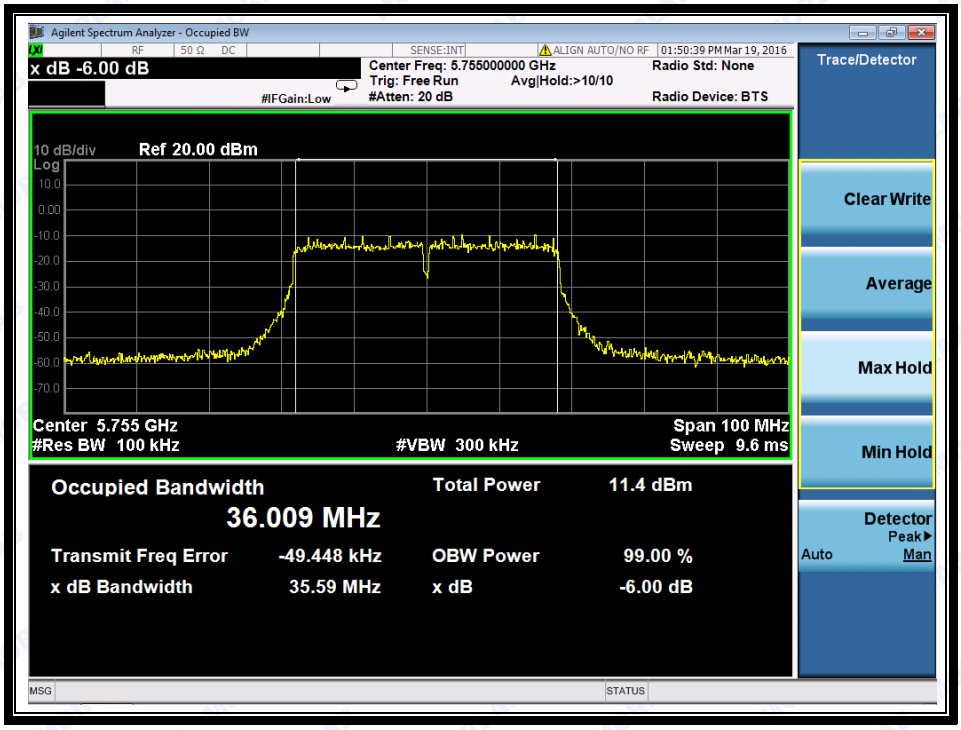
(Channel 159: 5795MHz @ 802.11ac Antenna 1)



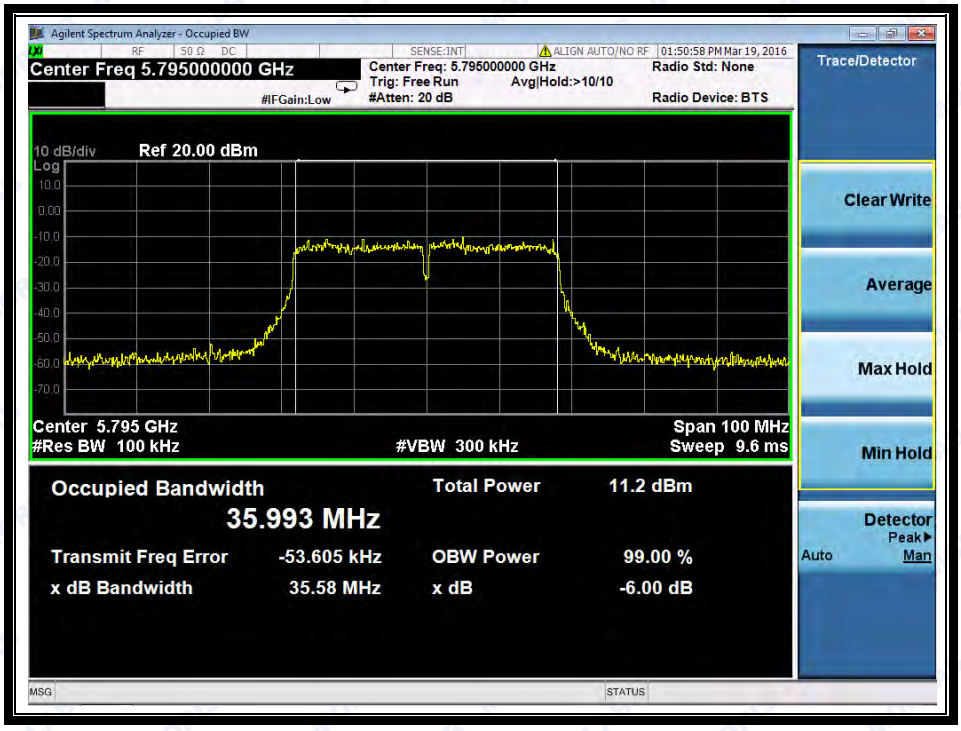
(Channel 38: 5190MHz @ 802.11ac Antenna 2)



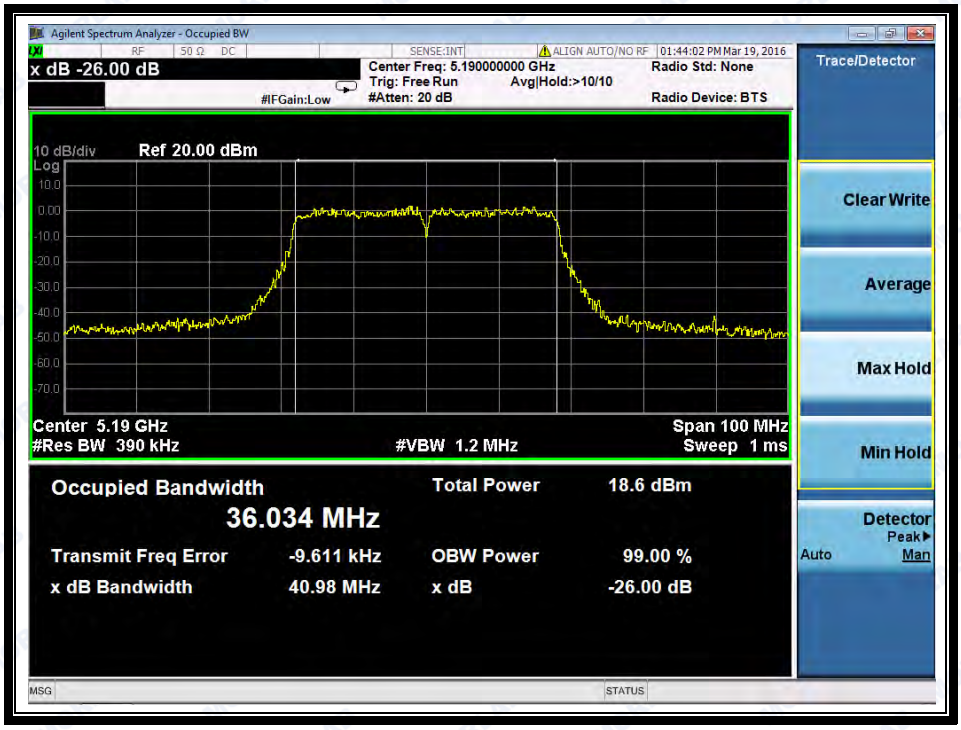
(Channel 46: 5230 MHz @ 802.11ac Antenna 2)



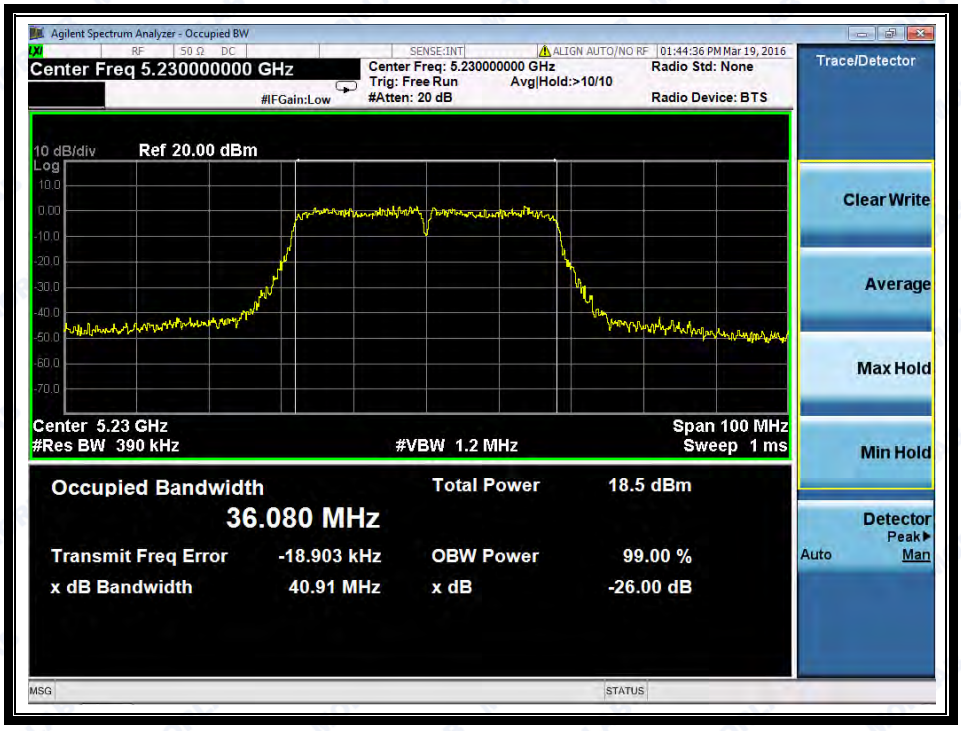
(Channel 151: 5755MHz @ 802.11ac Antenna 2)



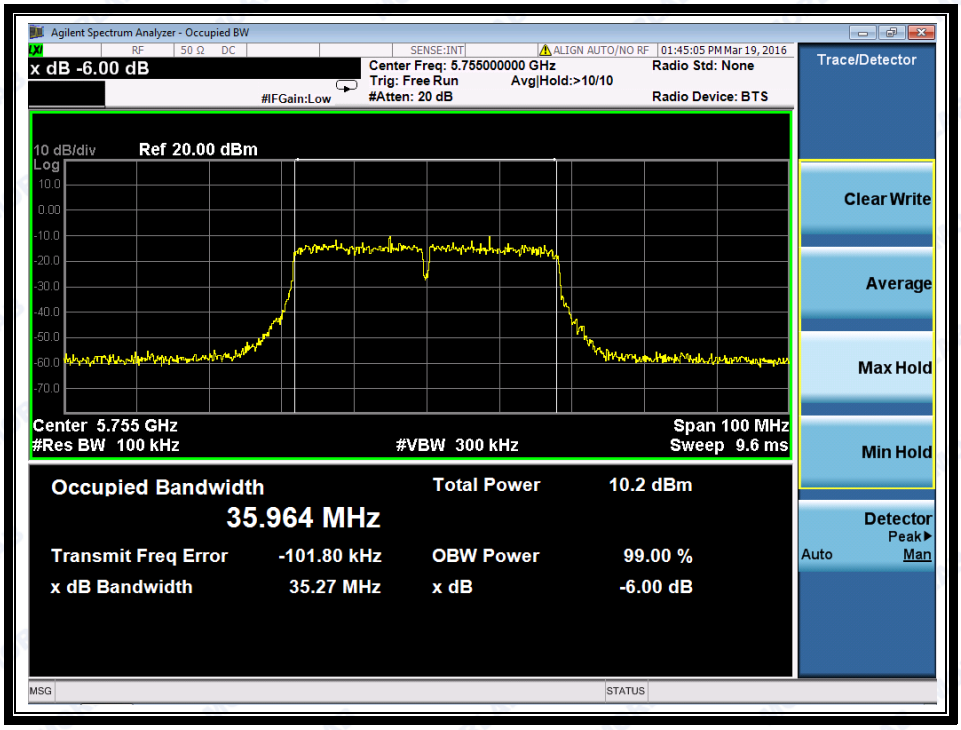
(Channel 159: 5795MHz @ 802.11ac Antenna 2)



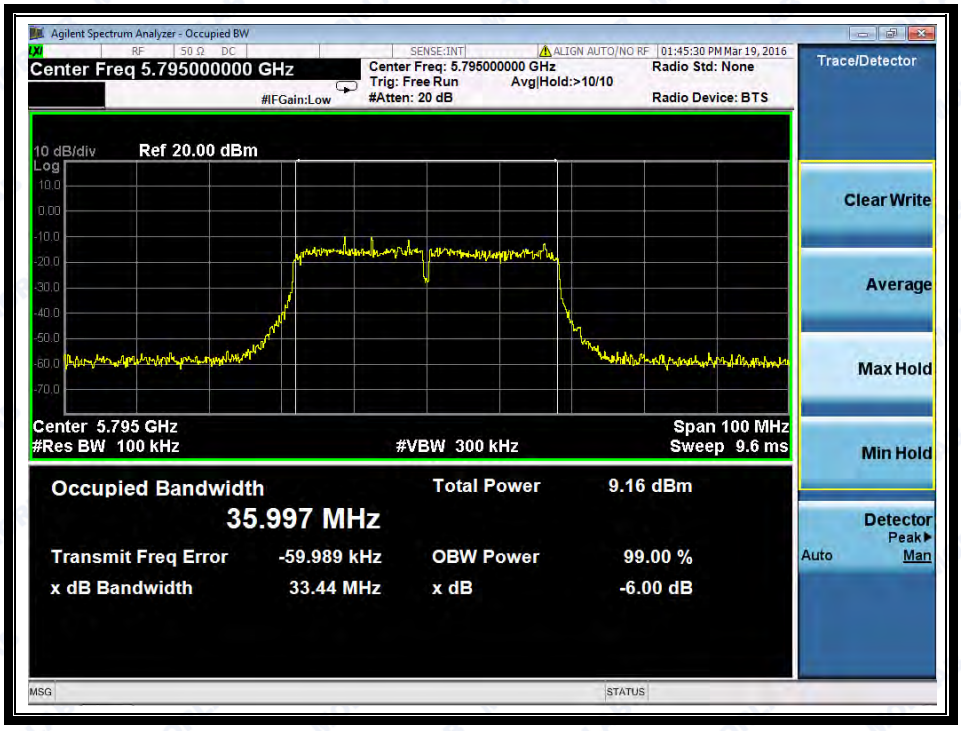
(Channel 38: 5190MHz @ 802.11ac Antenna 3)



(Channel 46: 5230 MHz @ 802.11ac Antenna 3)



(Channel 151: 5755MHz @ 802.11ac Antenna 3)



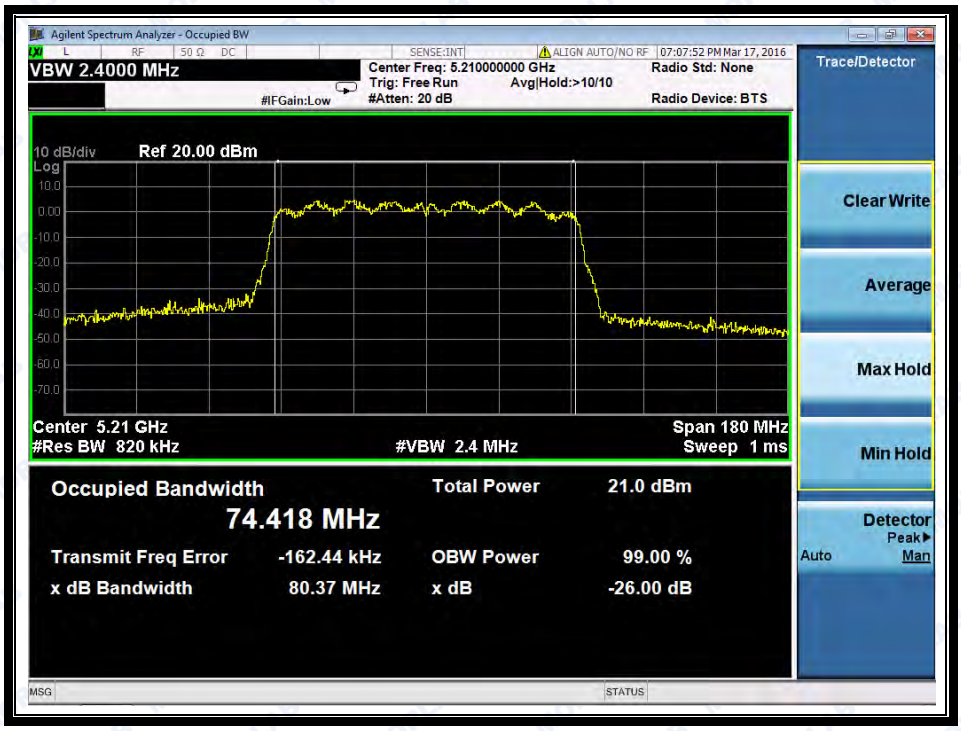
(Channel 159: 5795MHz @ 802.11ac Antenna 3)

2.2.3.3 802.11ac-80MHz Test mode

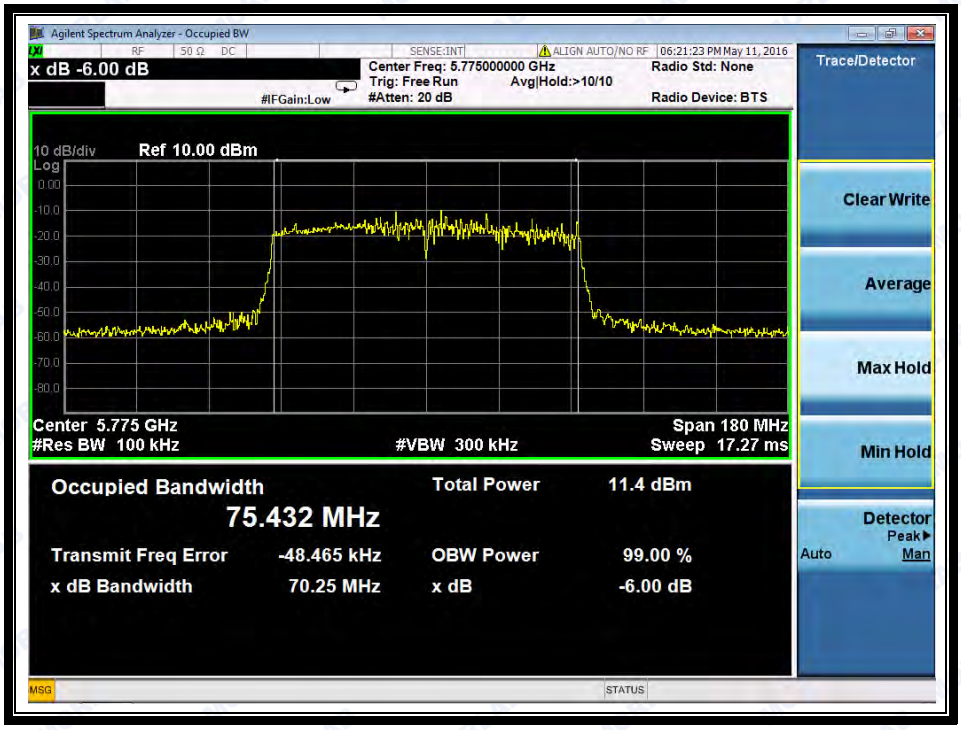
A. Test Verdict:

Channel	Frequency (MHz)	26 dB Bandwidth (MHz) ANT 1	26 dB Bandwidth (MHz) ANT 2	26 dB Bandwidth (MHz) ANT 3
42	5210	80.37	79.61	79.73
Channel	Frequency (MHz)	6dB Bandwidth (MHz) ANT 1	6dB Bandwidth (MHz) ANT 2	6dB Bandwidth (MHz) ANT 3
155	5775	70.25	73.91	72.70

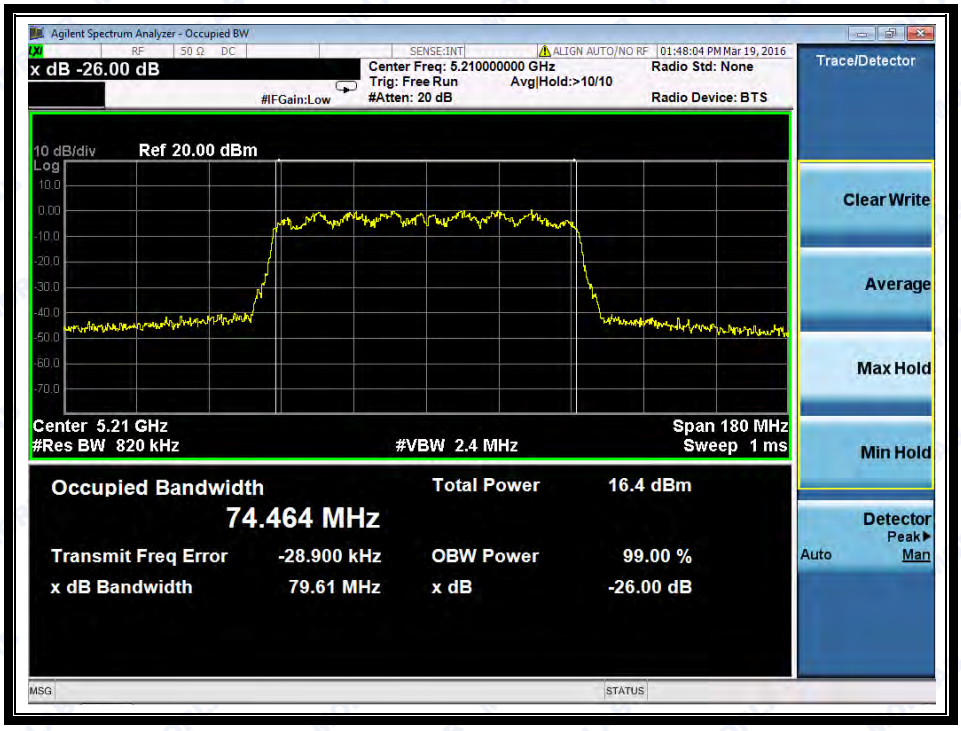
B. Test Plots



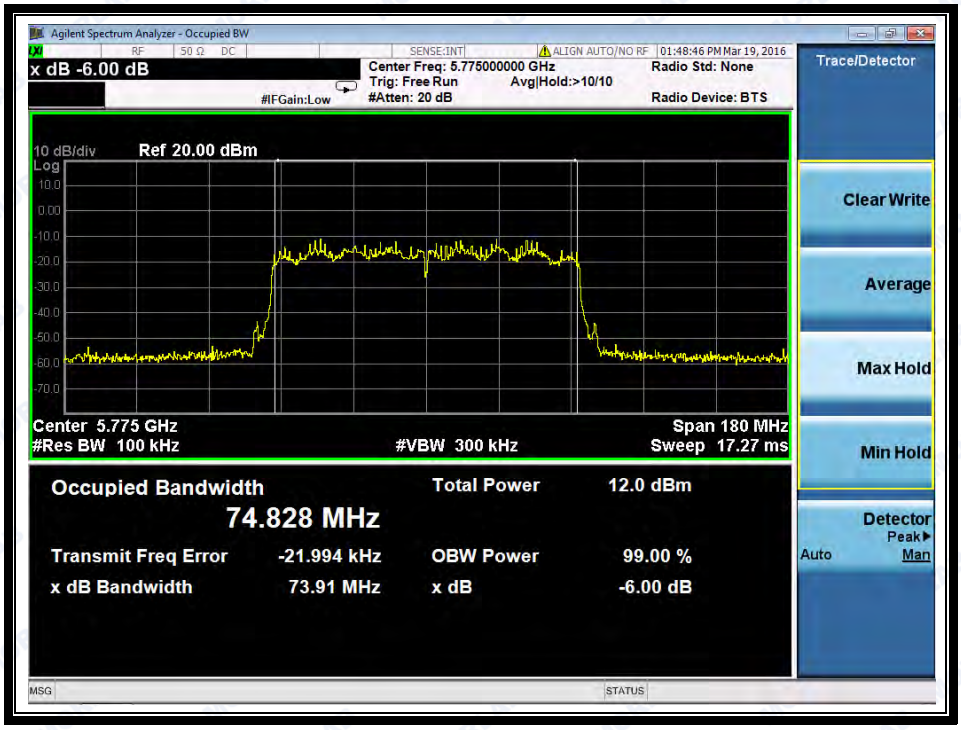
(Channel 42: 5210MHz @ 802.11ac Antenna 1)



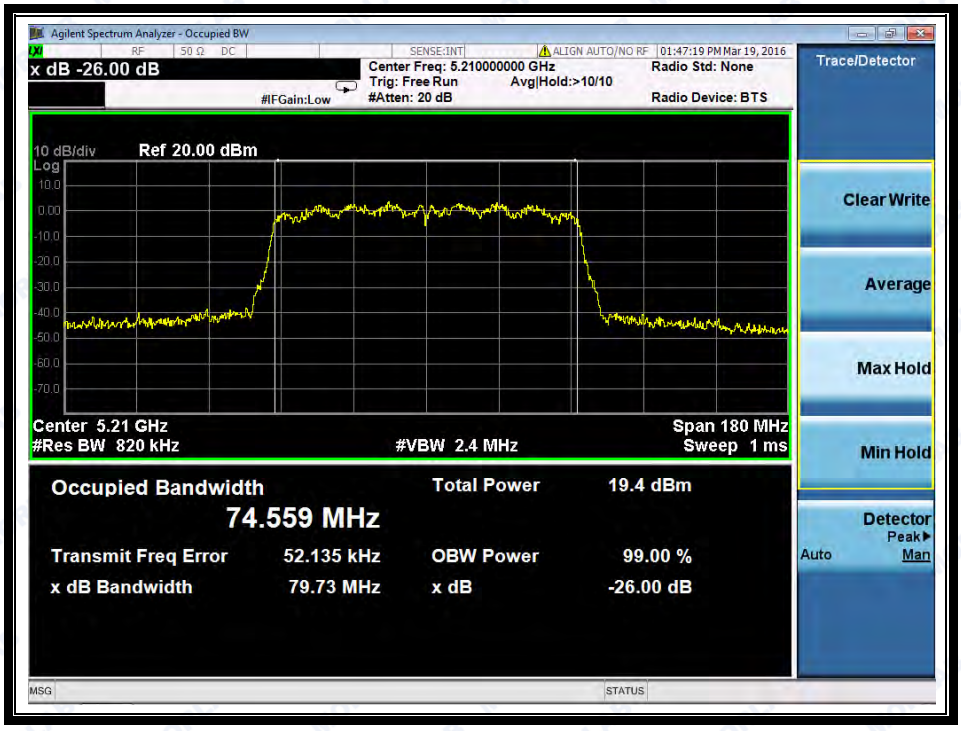
(Channel 155: 5775MHz @ 802.11ac Antenna 1)



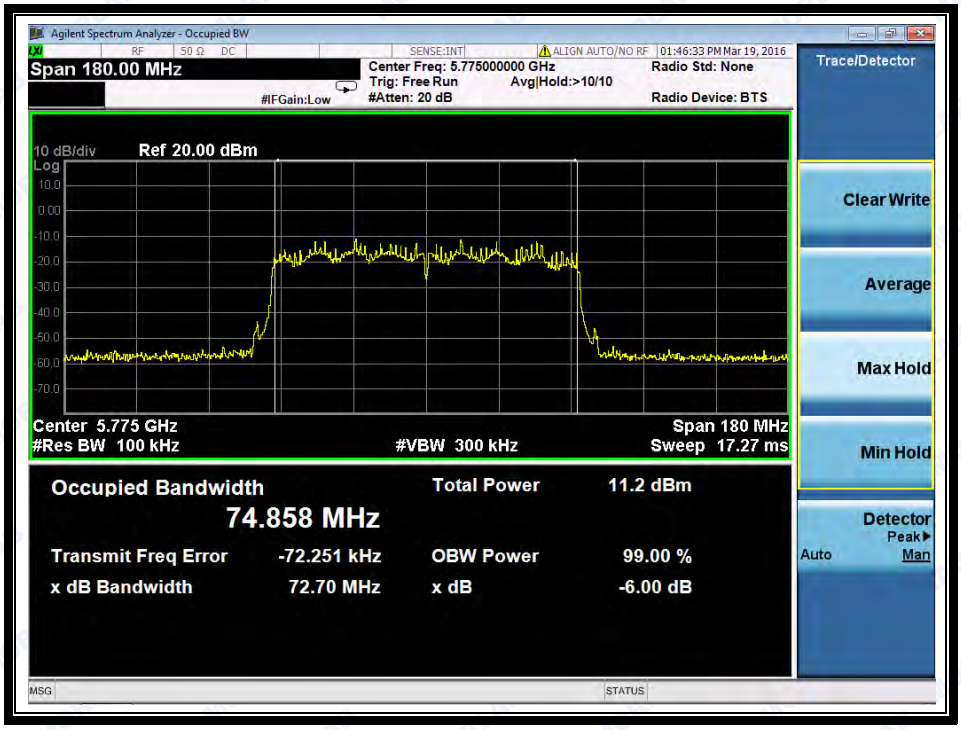
(Channel 42: 5210MHz @ 802.11ac Antenna 2)



(Channel 155: 5775MHz @ 802.11ac Antenna 2)



(Channel 42: 5210MHz @ 802.11ac Antenna 3)



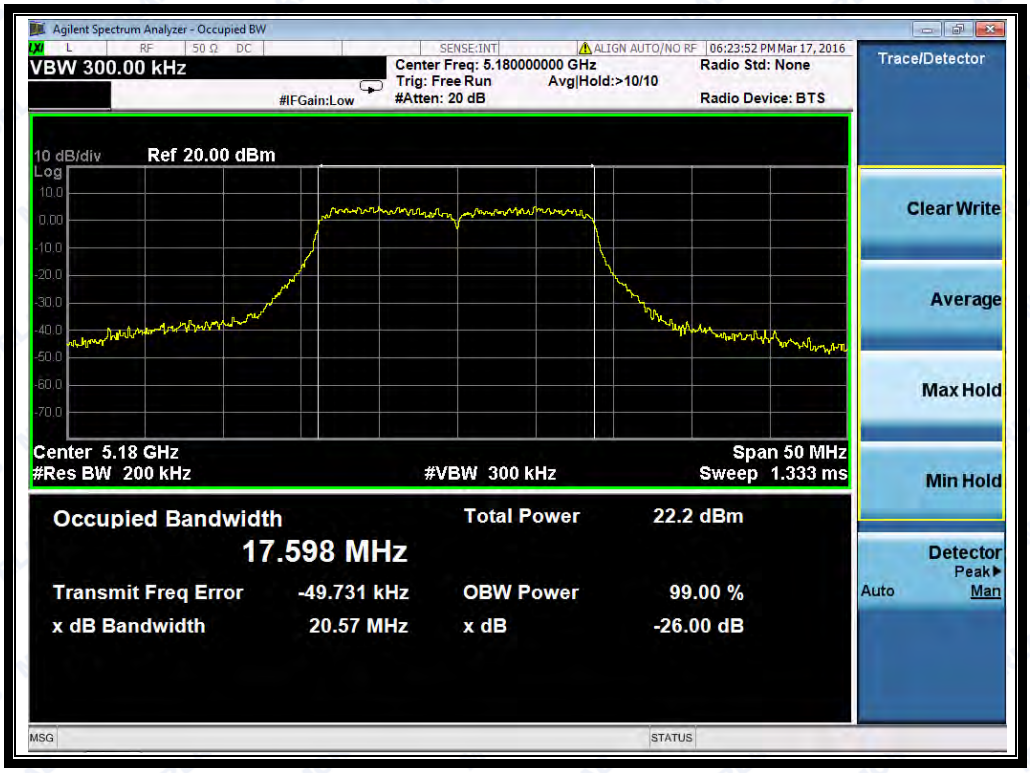
(Channel 155: 5775MHz @ 802.11ac Antenna 3)

2.2.3.4 802.11n-20MHz Test mode

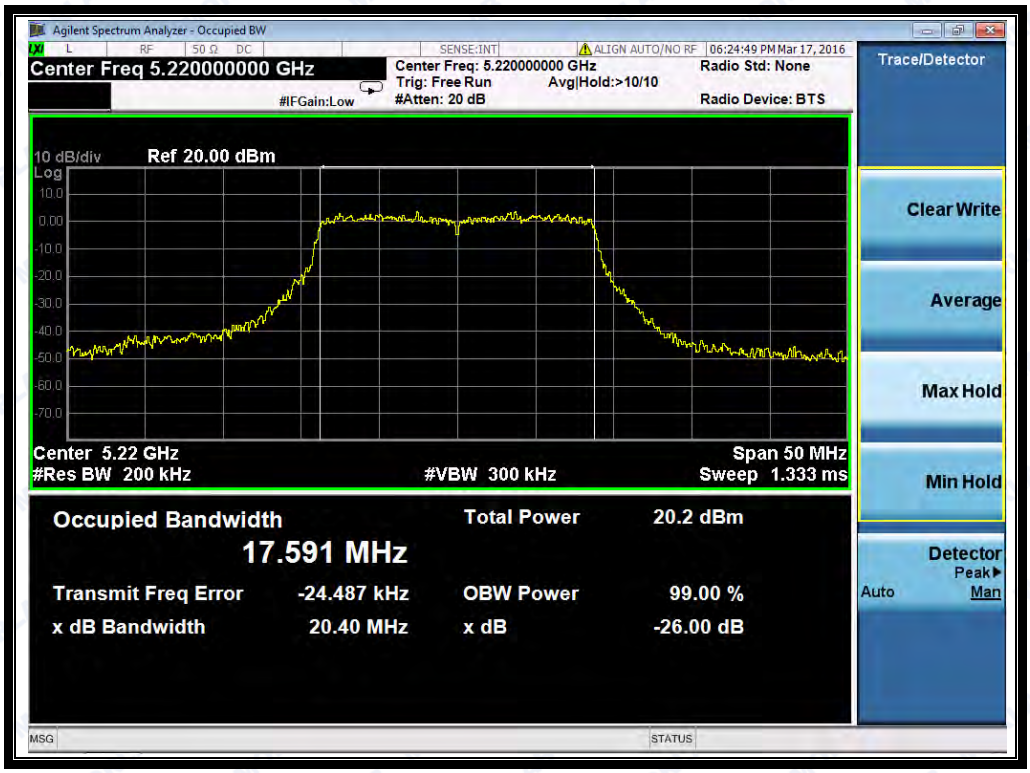
A. Test Verdict:

Channel	Frequency (MHz)	26 dB Bandwidth (MHz) ANT 1	26 dB Bandwidth (MHz) ANT 2	26 dB Bandwidth (MHz) ANT 3
36	5180	20.57	20.54	20.45
44	5220	20.40	19.90	20.41
48	5240	20.52	20.62	20.20
Channel	Frequency (MHz)	6dB Bandwidth (MHz) ANT 1	6dB Bandwidth (MHz) ANT 2	6dB Bandwidth (MHz) ANT 3
149	5745	17.06	17.05	17.30
157	5785	16.59	17.69	17.58
165	5825	16.36	17.43	15.24

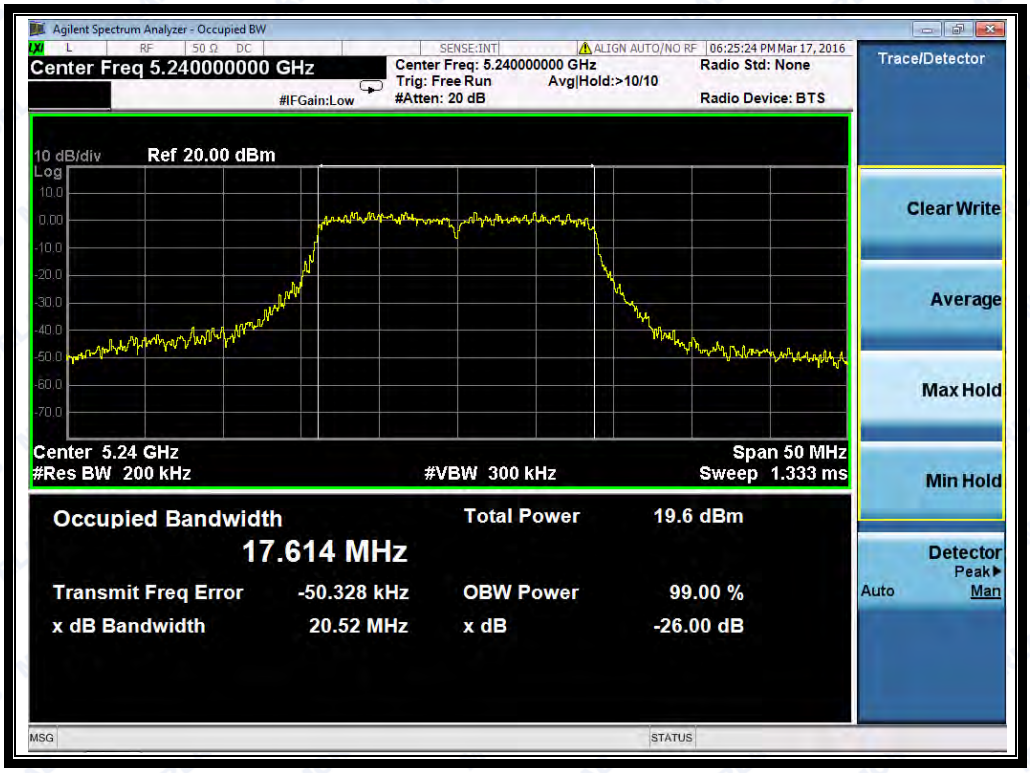
B. Test Plots



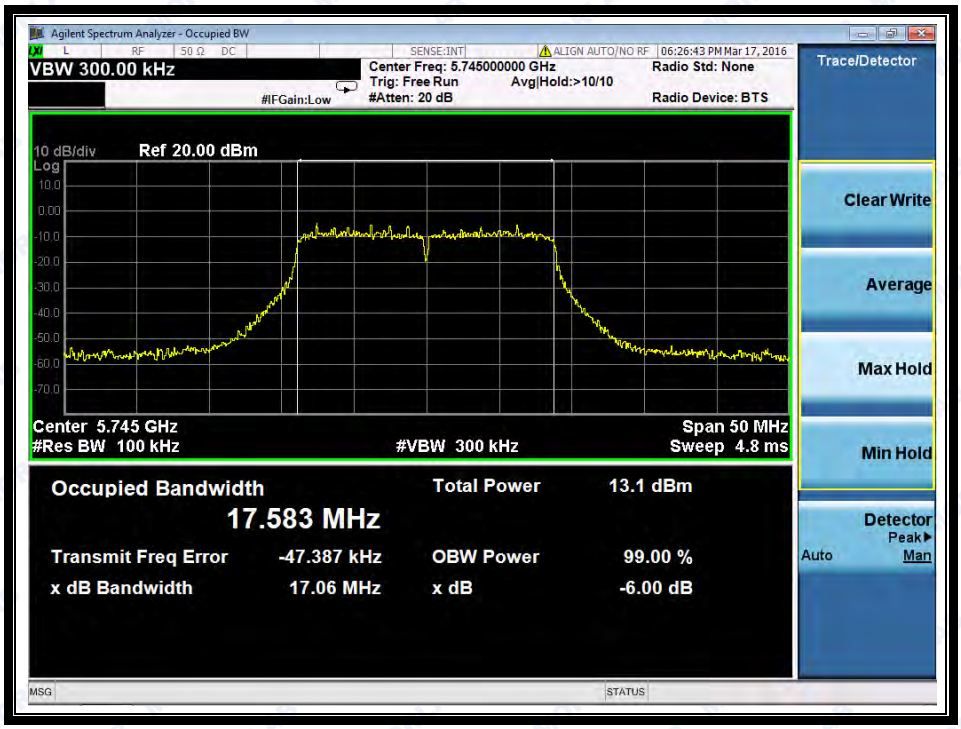
(Channel 36: 5180MHz @ 802.11n-20MHz Antenna 1)



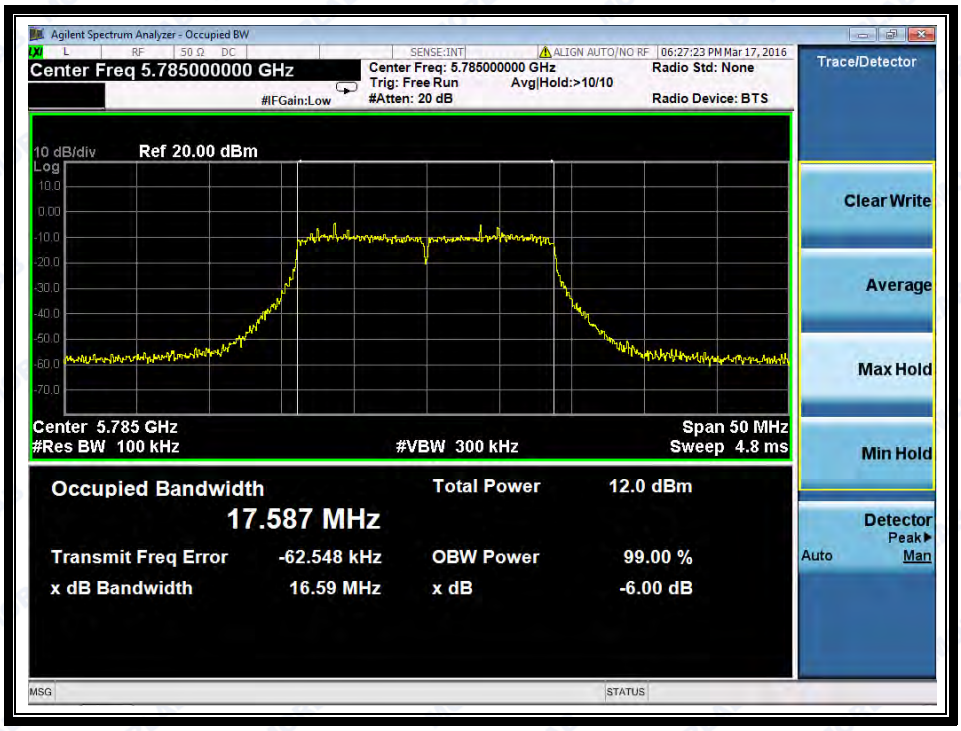
(Channel 44: 5220 MHz @ 802.11n-20MHz Antenna 1)



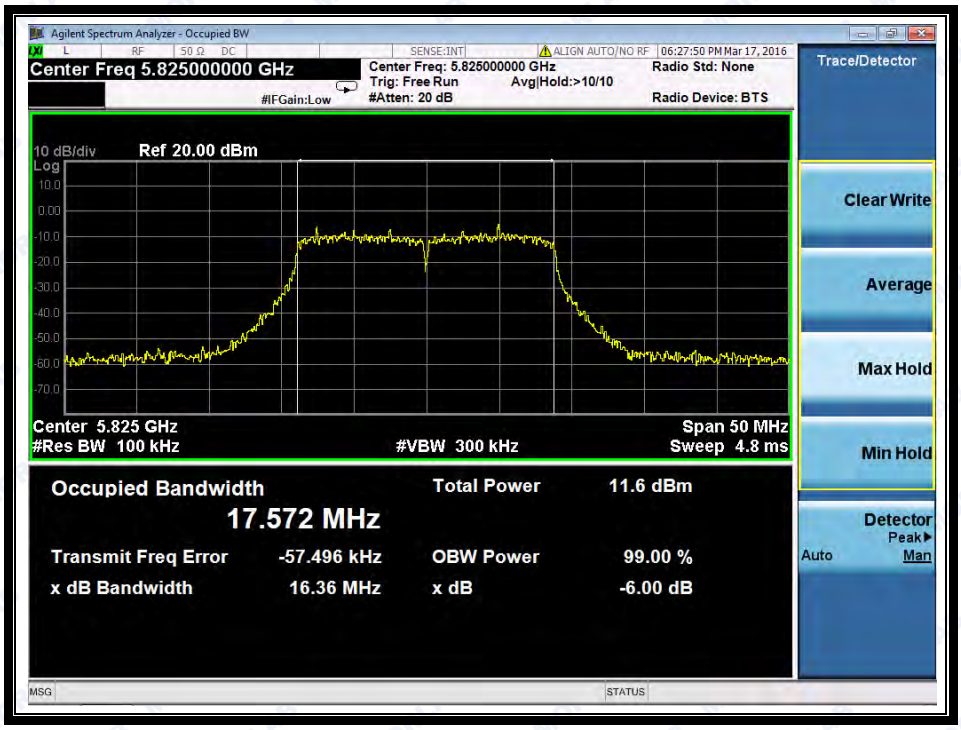
(Channel 48: 5240MHz @ 802.11n-20MHz Antenna 1)



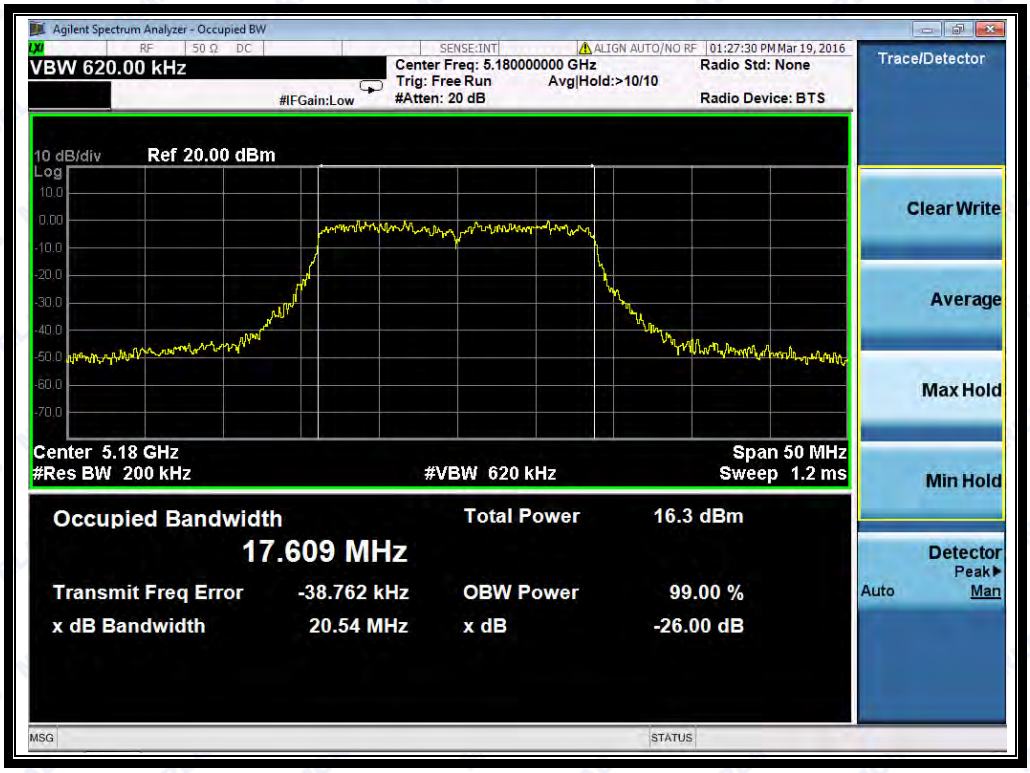
(Channel 149: 5745MHz @ 802.11n-20MHz Antenna 1)



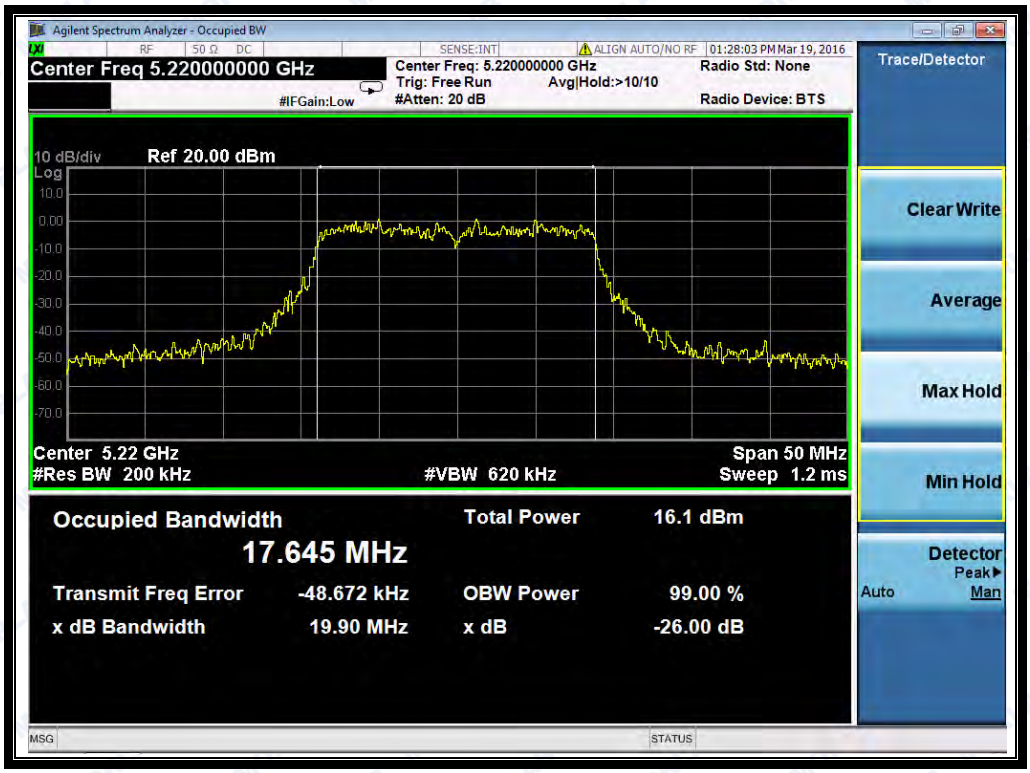
(Channel 157: 5785MHz @802.11n-20MHz Antenna 1)



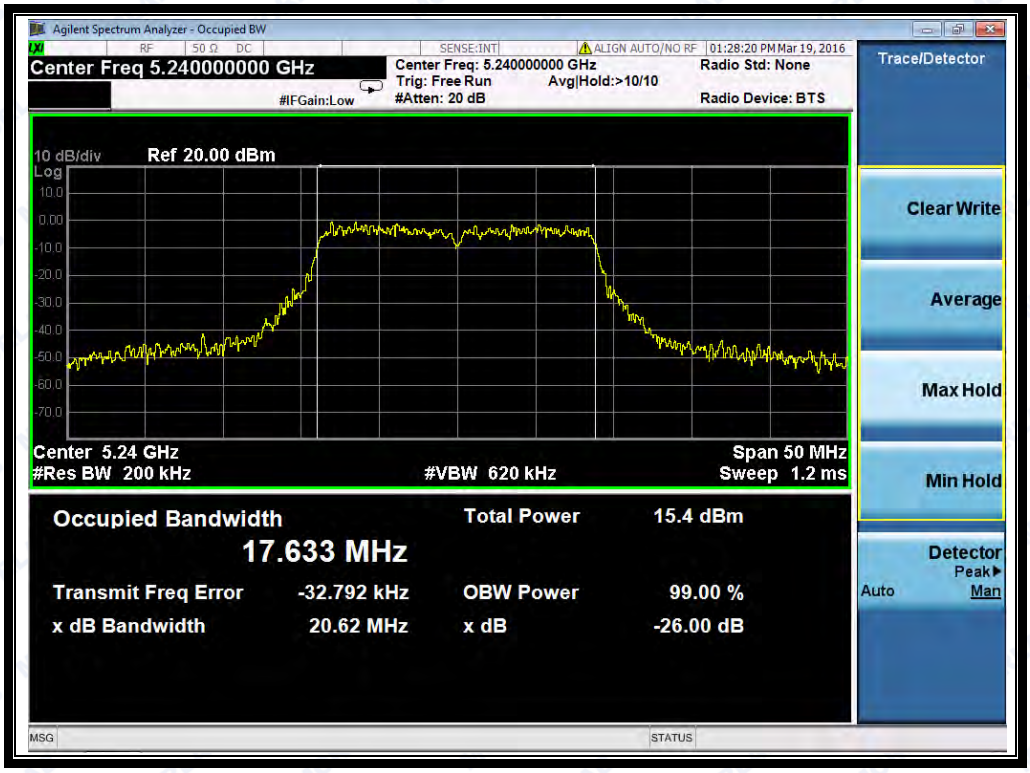
(Channel 165: 5825MHz @ 802.11n-20MHz Antenna 1)



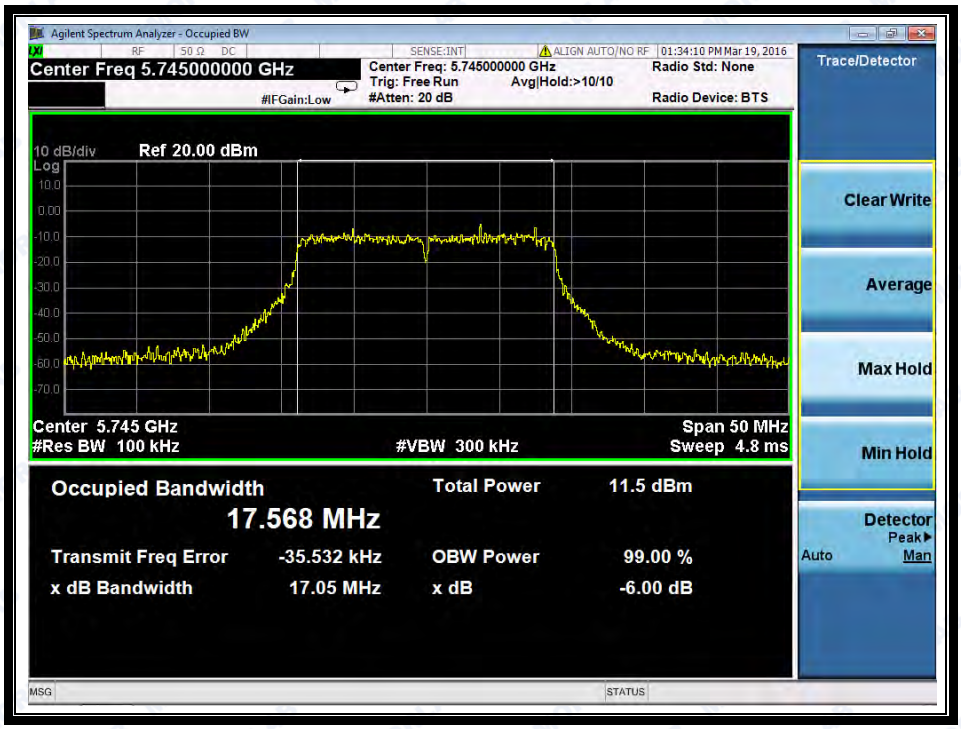
(Channel 36: 5180MHz @ 802.11n-20MHz Antenna 2)



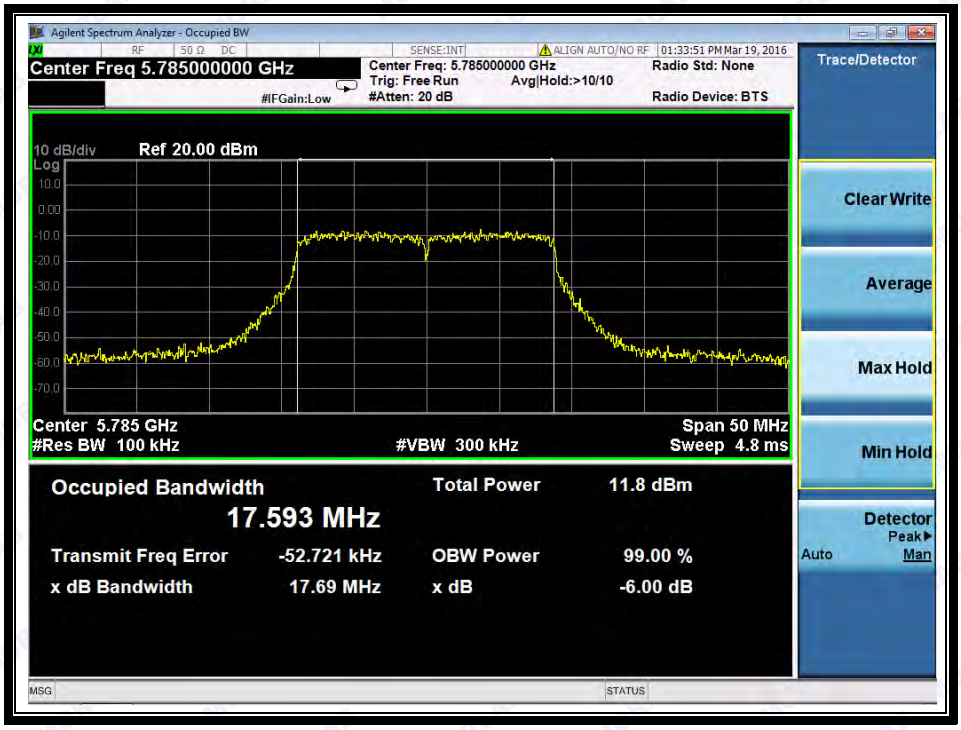
(Channel 44: 5220 MHz @ 802.11n-20MHz Antenna 2)



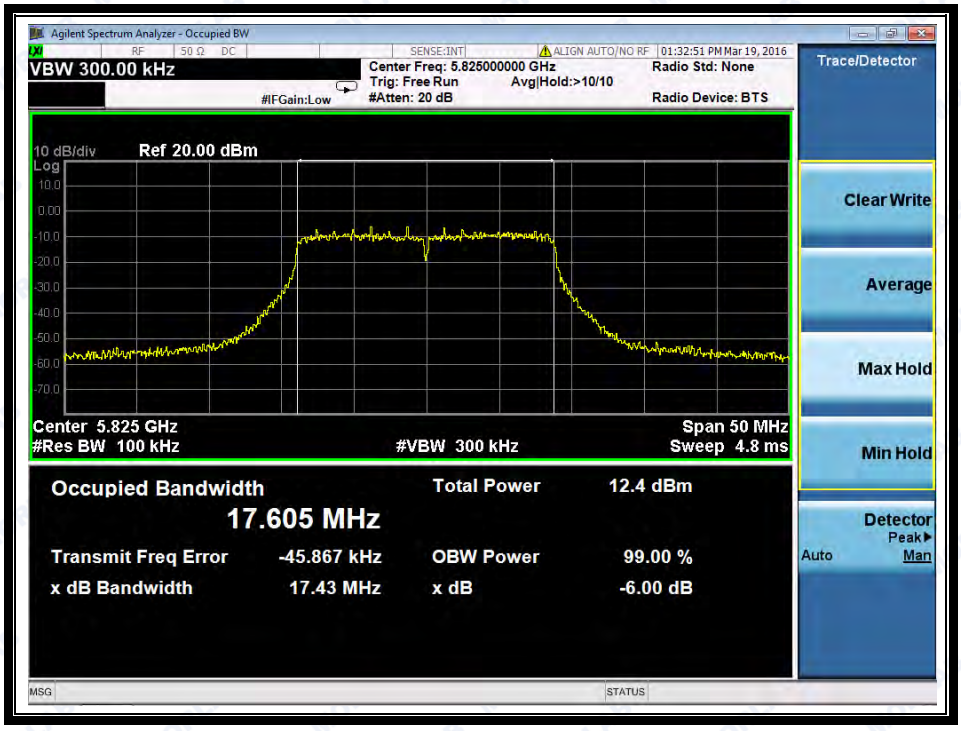
(Channel 48: 5240MHz @ 802.11n-20MHz Antenna 2)



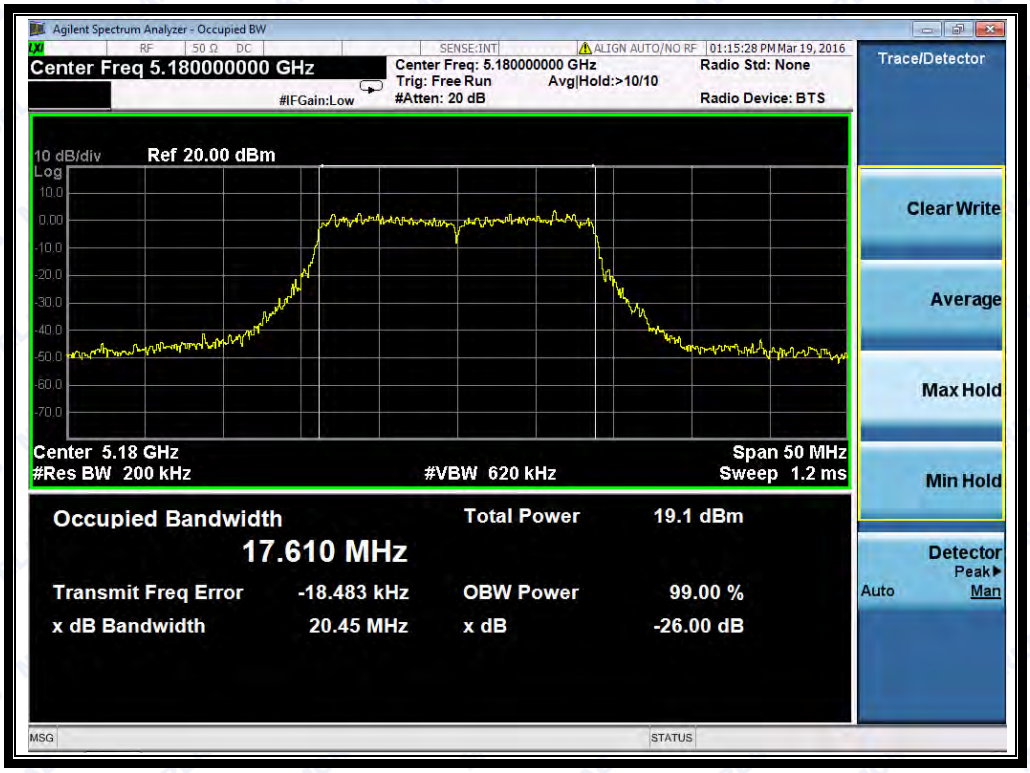
(Channel 149: 5745MHz @ 802.11n-20MHz Antenna 2)



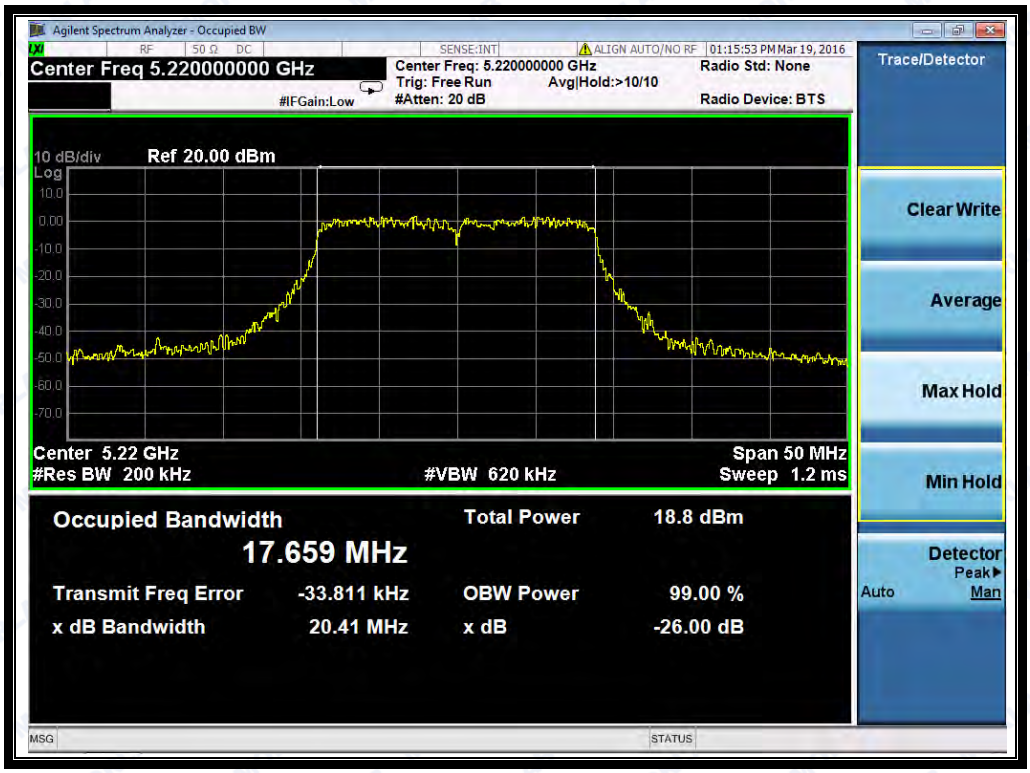
(Channel 157: 5785MHz @802.11n-20MHz Antenna 2)



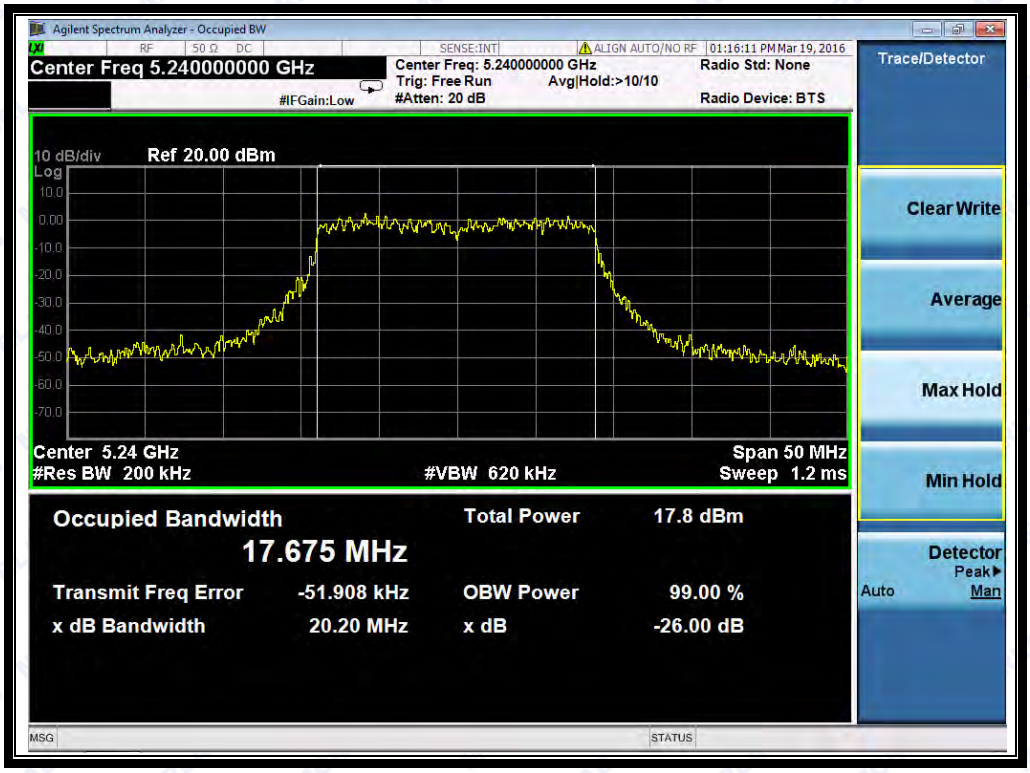
(Channel 165: 5825MHz @ 802.11n-20MHz Antenna 2)



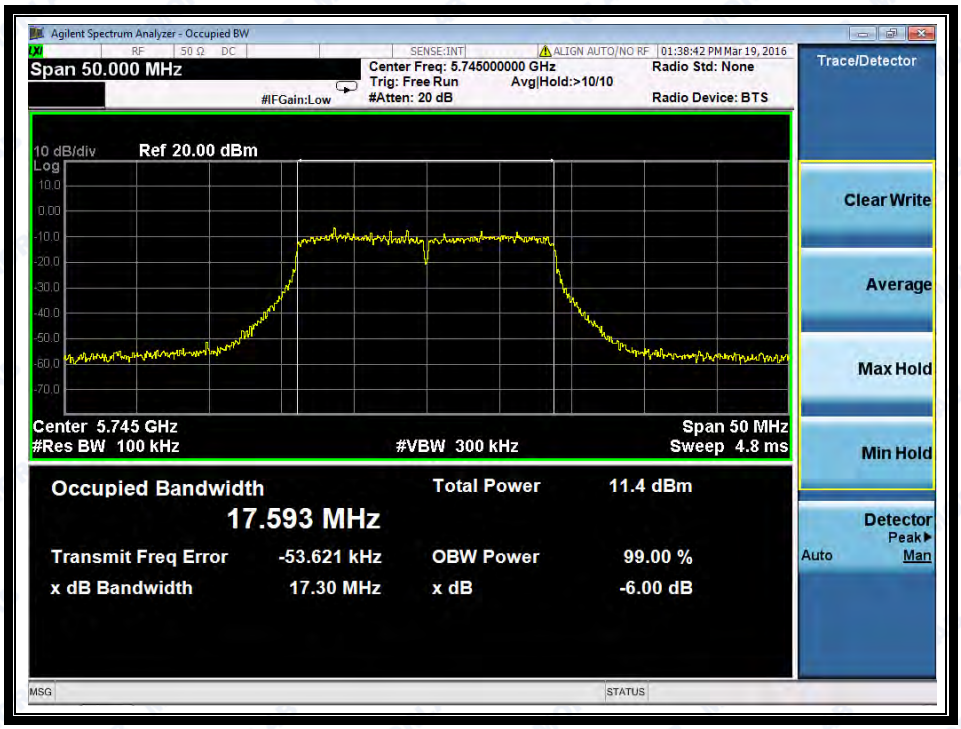
(Channel 36: 5180MHz @ 802.11n-20MHz Antenna 3)



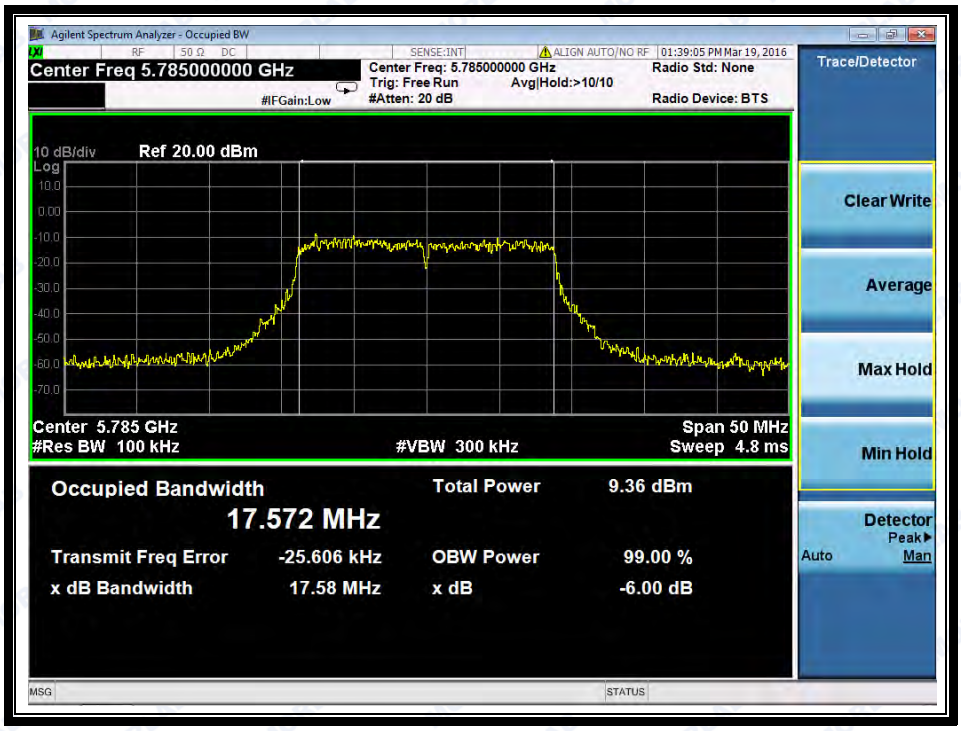
(Channel 44: 5220 MHz @ 802.11n-20MHz Antenna 3)



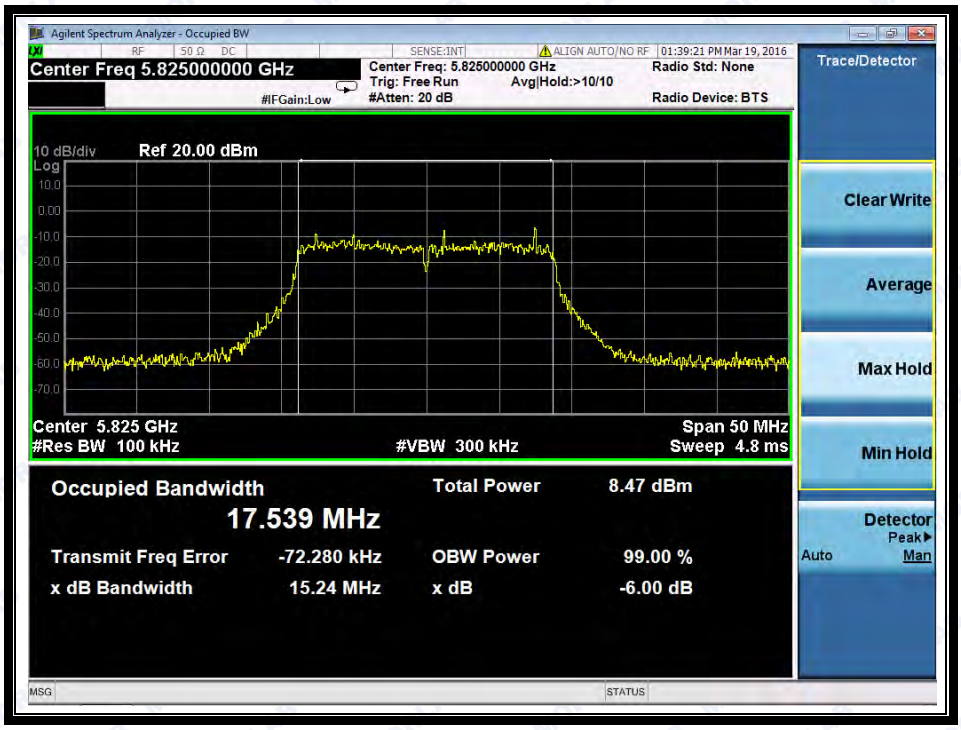
(Channel 48: 5240MHz @ 802.11n-20MHz Antenna 3)



(Channel 149: 5745MHz @ 802.11n-20MHz Antenna 3)



(Channel 157: 5785MHz @802.11n-20MHz Antenna 3)



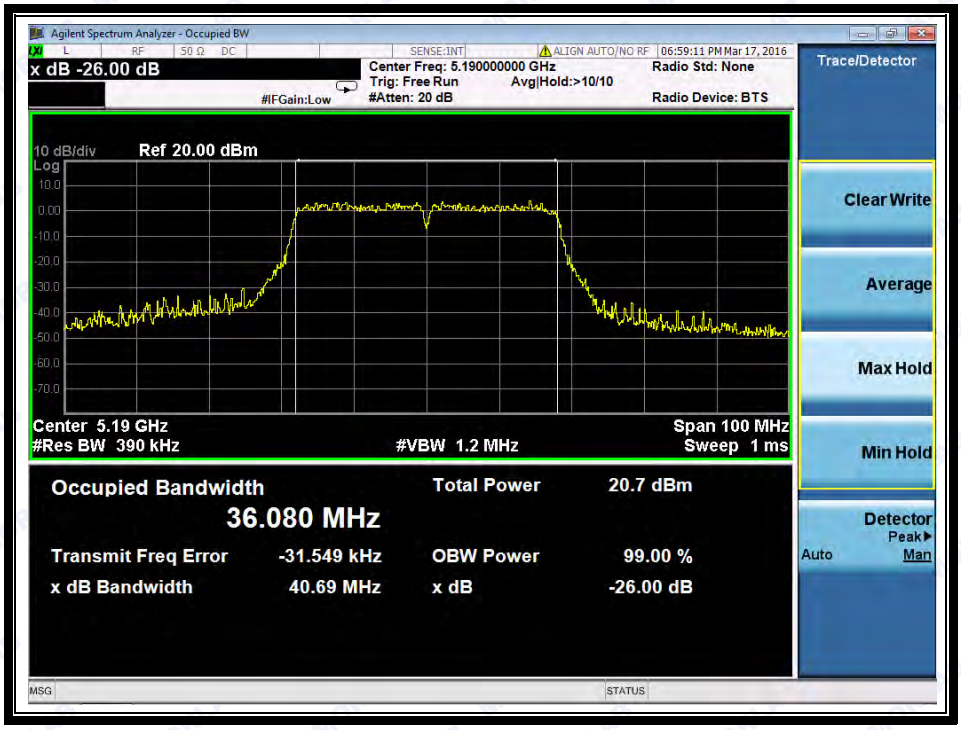
(Channel 165: 5825MHz @ 802.11n-20MHz Antenna 3)

2.2.3.5 802.11n-40MHz Test mode

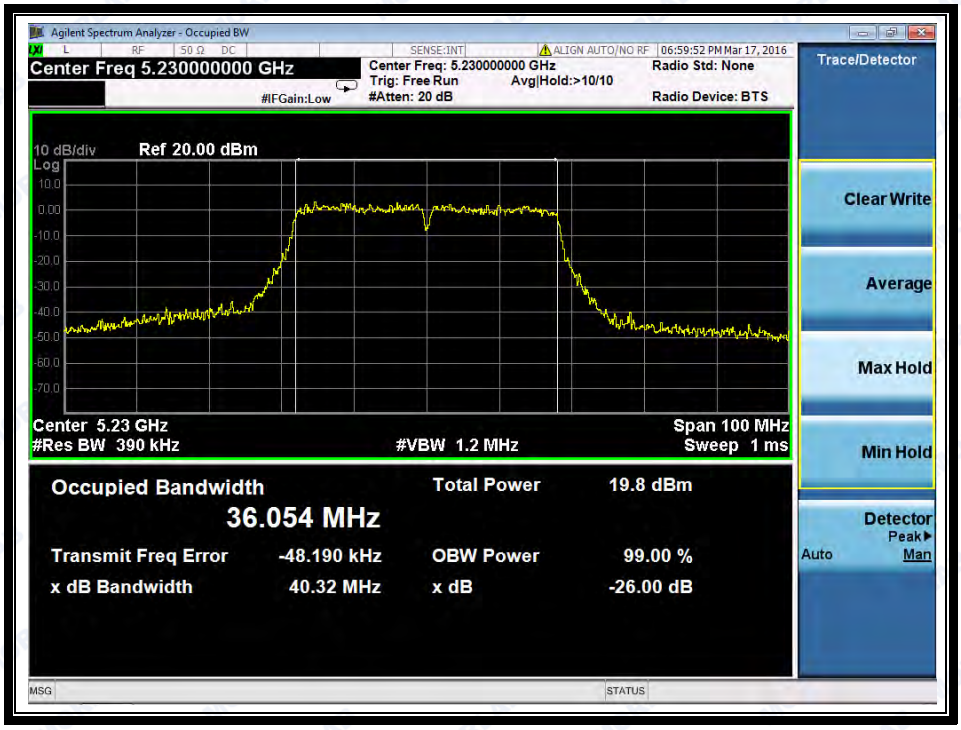
A. Test Verdict:

Channel	Frequency (MHz)	26 dB Bandwidth (MHz) ANT 1	26 dB Bandwidth (MHz) ANT 2	26 dB Bandwidth (MHz) ANT 3
38	5190	40.69	40.62	40.75
46	5230	40.32	40.29	40.78
Channel	Frequency (MHz)	6dB Bandwidth (MHz) ANT 1	6dB Bandwidth (MHz) ANT 2	6dB Bandwidth (MHz) ANT 3
151	5755	33.89	35.25	35.12
159	5795	32.63	34.94	33.86

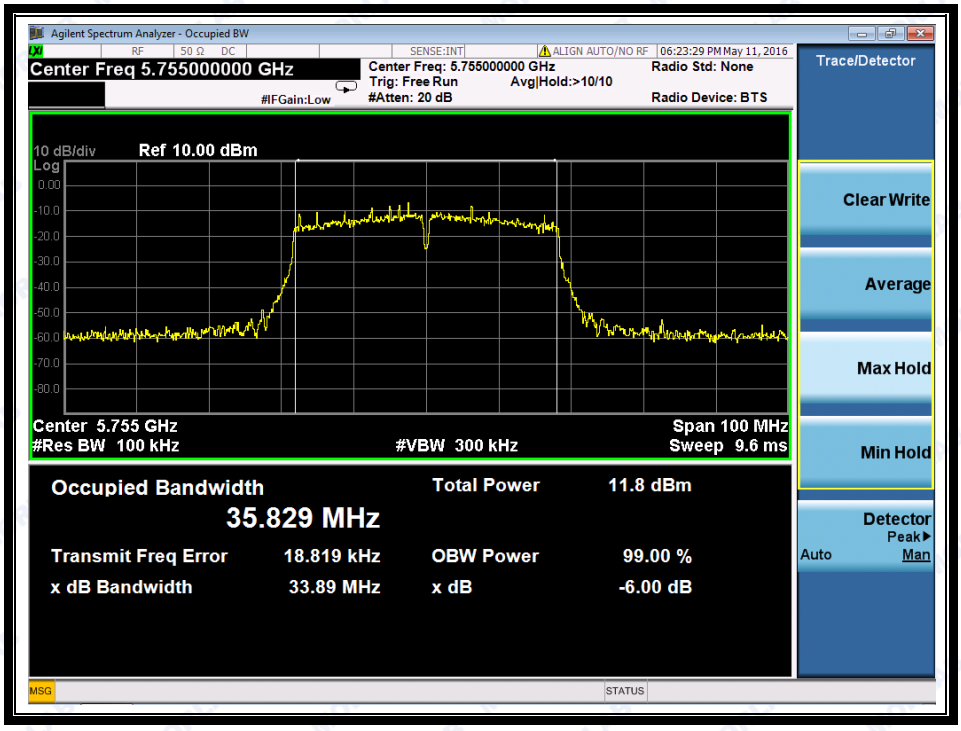
B. Test Plots



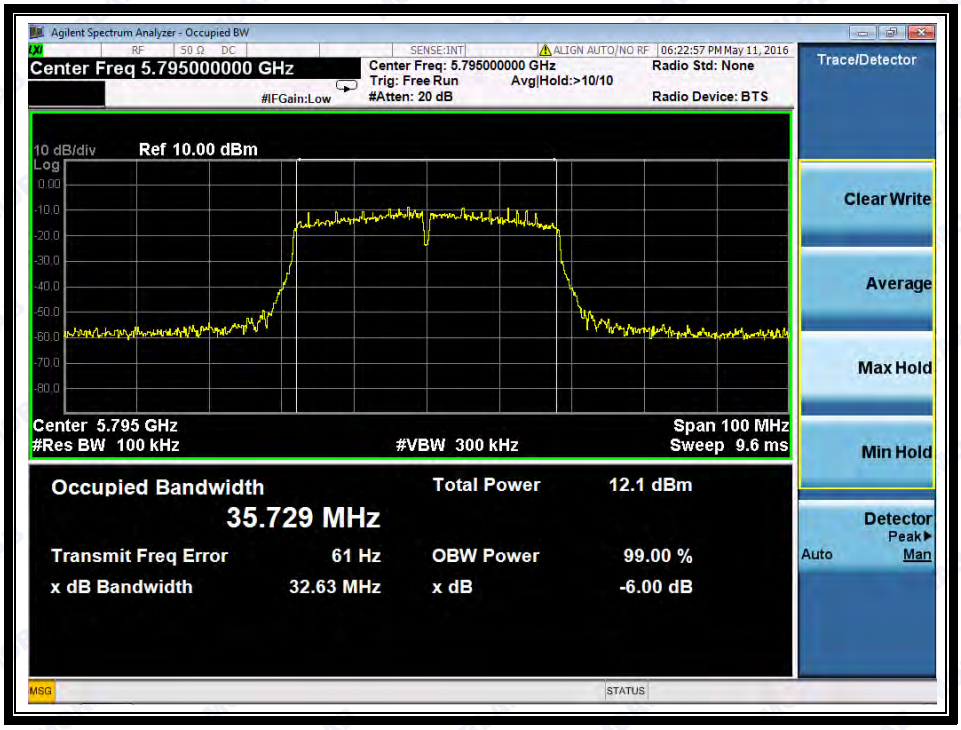
(Channel 38: 5190MHz @ 802.11n-40MHz Antenna 1)



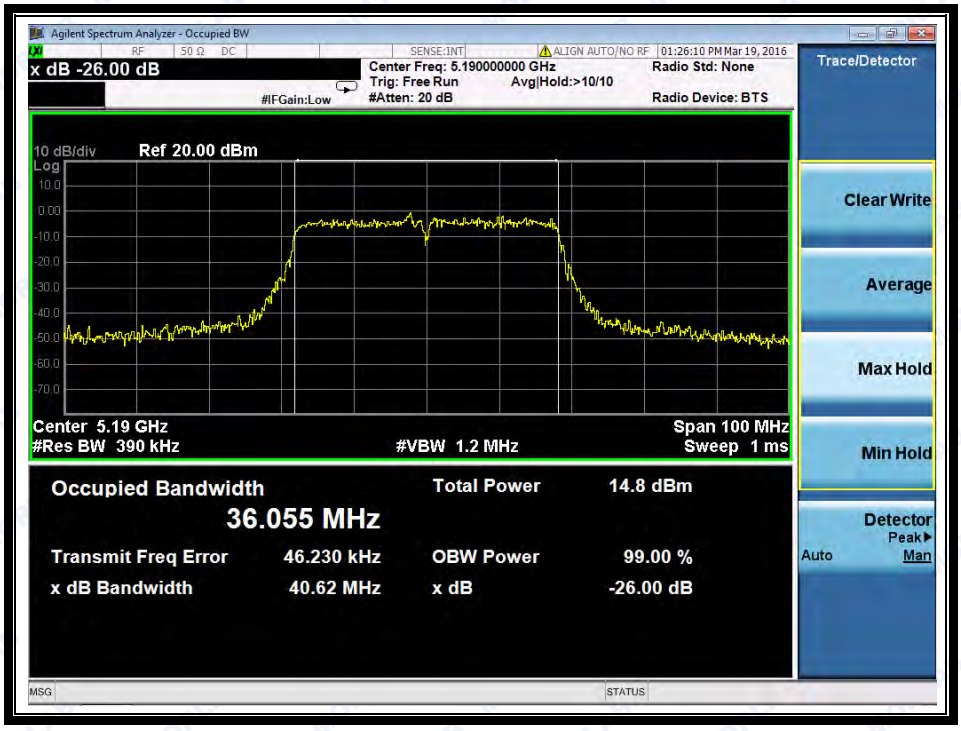
(Channel 46: 5230 MHz @ 802.11n-40MHz Antenna 1)



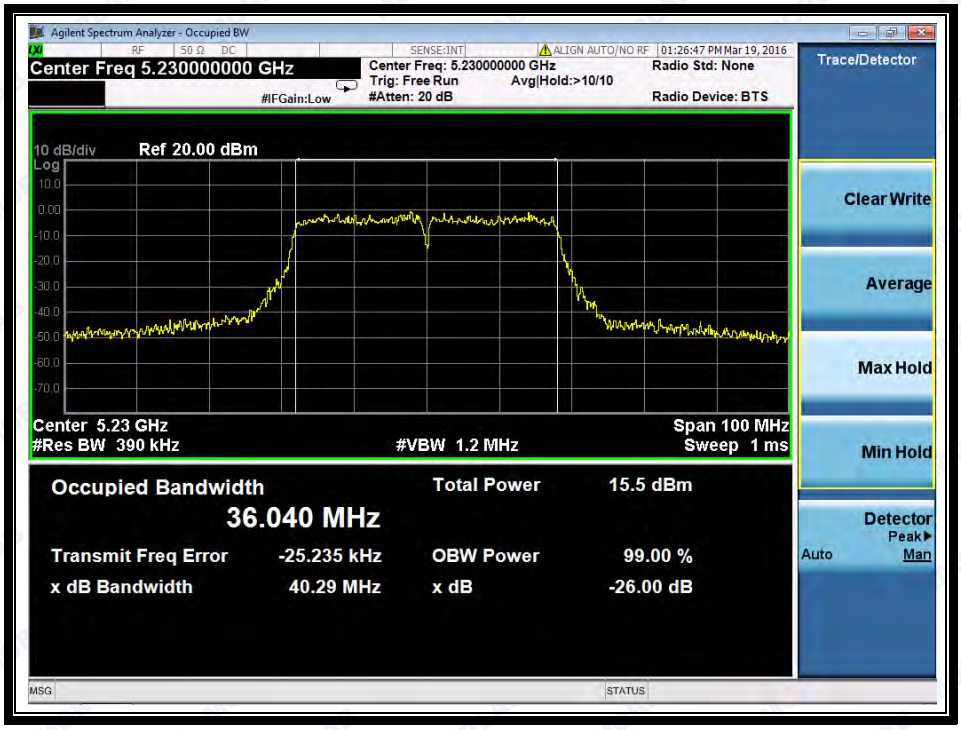
(Channel 151: 5755MHz @ 802.11n-40MHz Antenna 1)



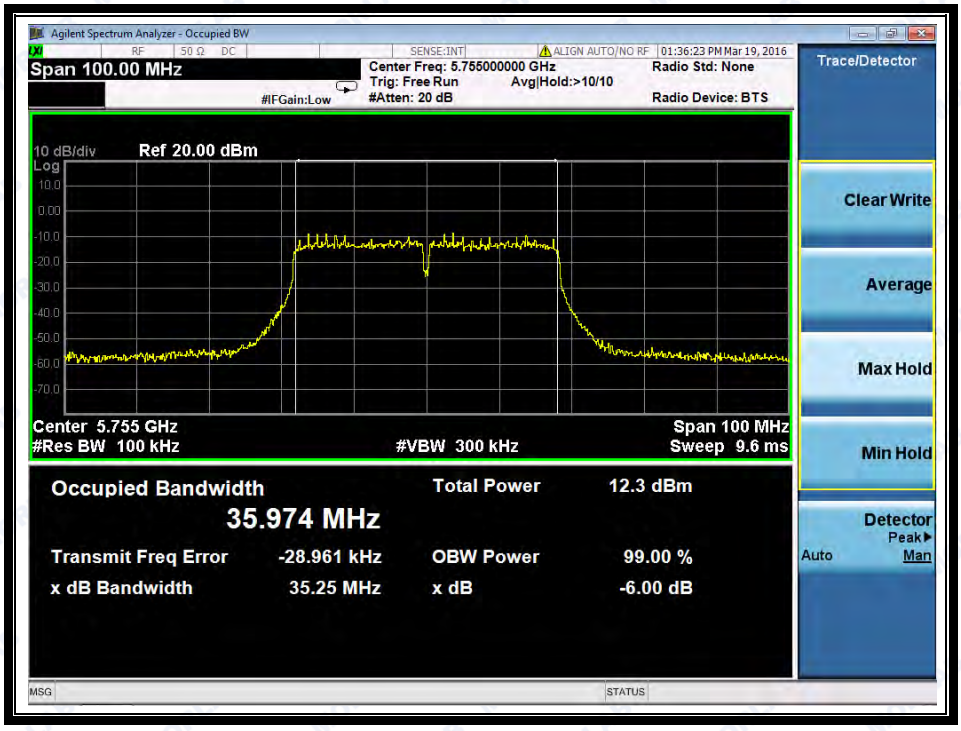
(Channel 159: 5795MHz @802.11n-40MHz Antenna 1)



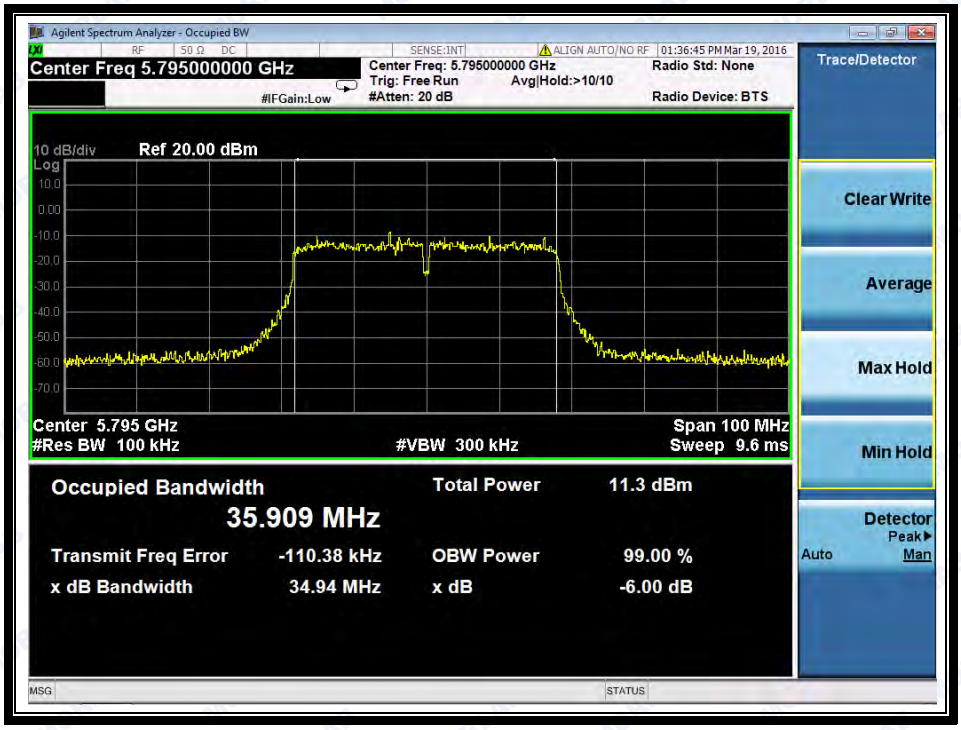
(Channel 38: 5190MHz @ 802.11n-40MHz Antenna 2)



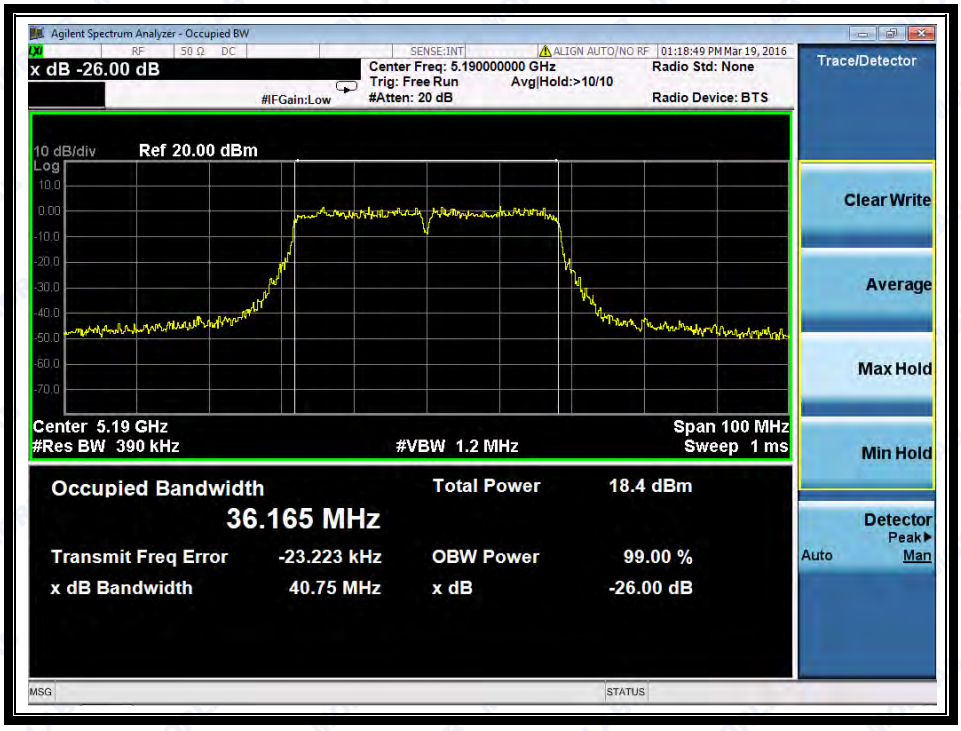
(Channel 46: 5230 MHz @ 802.11n-40MHz Antenna 2)



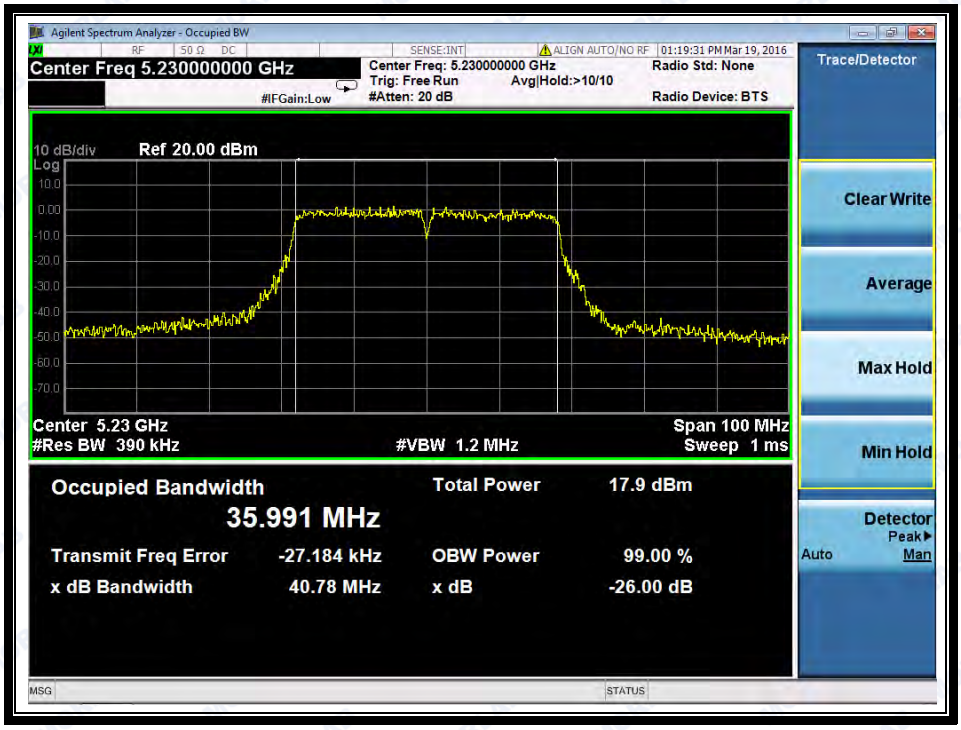
(Channel 151: 5755MHz @ 802.11n-40MHz Antenna 2)



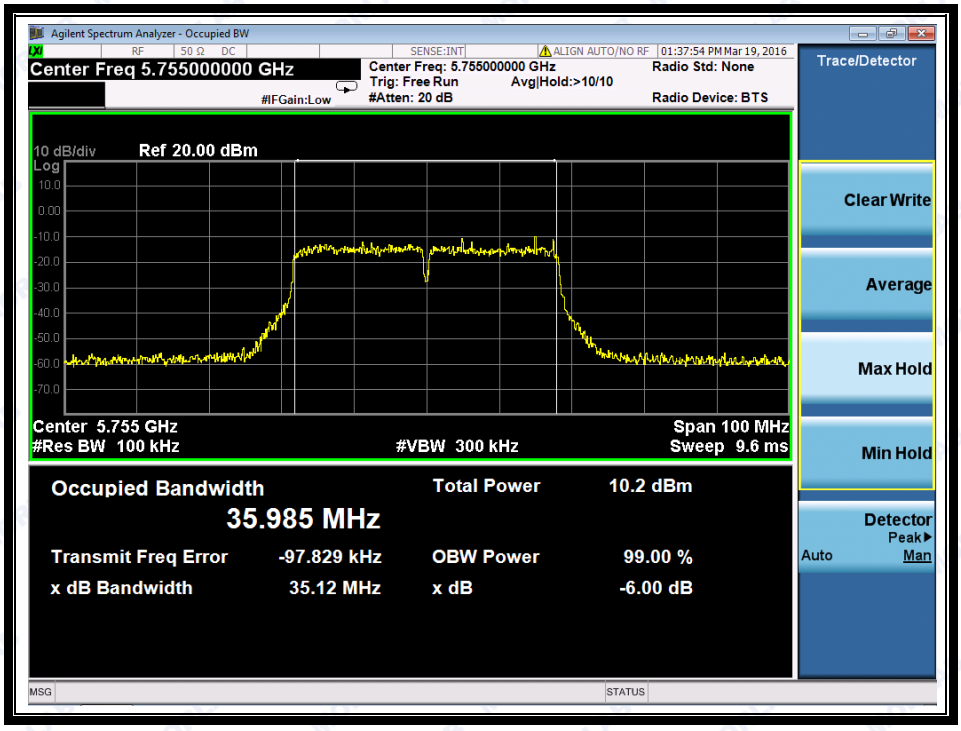
(Channel 159: 5795MHz @802.11n-40MHz Antenna 2)



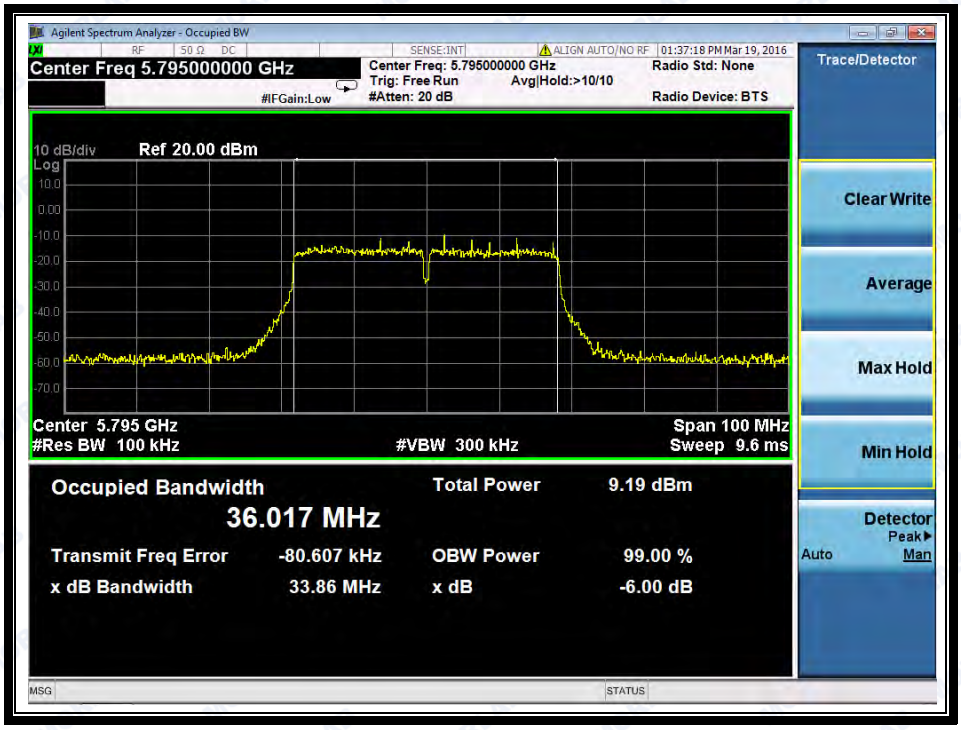
(Channel 38: 5190MHz @ 802.11n-40MHz Antenna 3)



(Channel 46: 5230 MHz @ 802.11n-40MHz Antenna 3)



(Channel 151: 5755MHz @ 802.11n-40MHz Antenna 3)



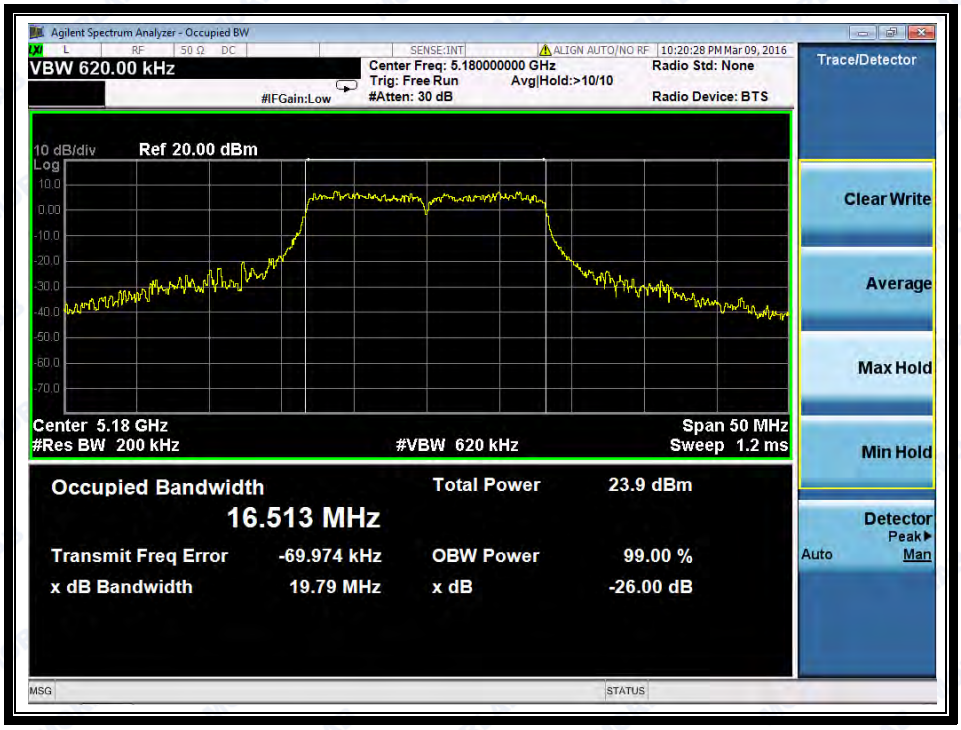
(Channel 159: 5795MHz @802.11n-40MHz Antenna 3)

2.2.3.6 802.11a Test mode

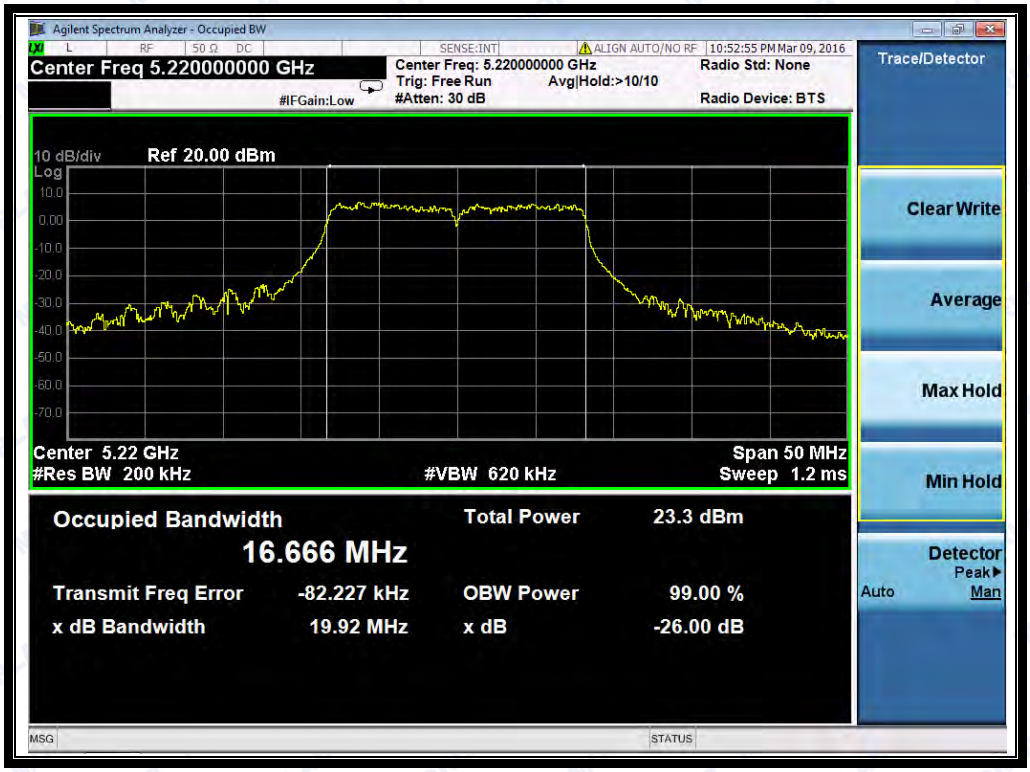
A. Test Verdict:

Channel	Frequency (MHz)	26 dB Bandwidth (MHz) ANT 1	26 dB Bandwidth (MHz) ANT 2	26 dB Bandwidth (MHz) ANT 3
36	5180	19.79	20.25	19.75
44	5220	19.92	19.71	19.34
48	5240	19.86	19.41	19.43
Channel	Frequency (MHz)	6dB Bandwidth (MHz) ANT 1	6dB Bandwidth (MHz) ANT 2	6dB Bandwidth (MHz) ANT 3
149	5745	16.37	16.38	15.75
157	5785	16.23	16.49	16.40
165	5825	16.35	16.36	16.39

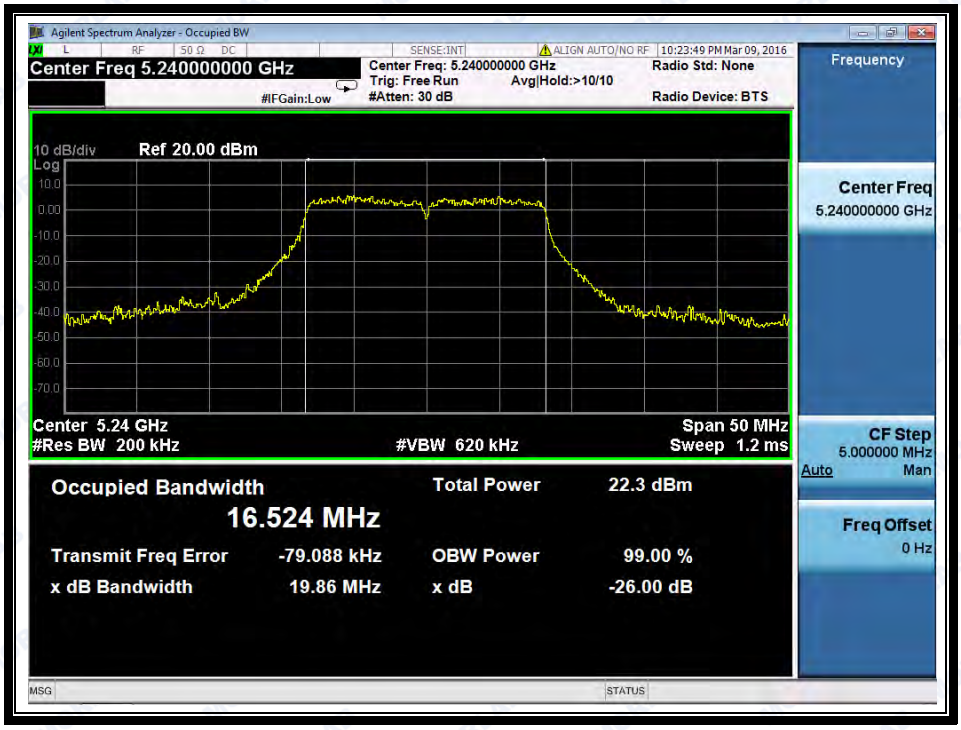
B. Test Plots



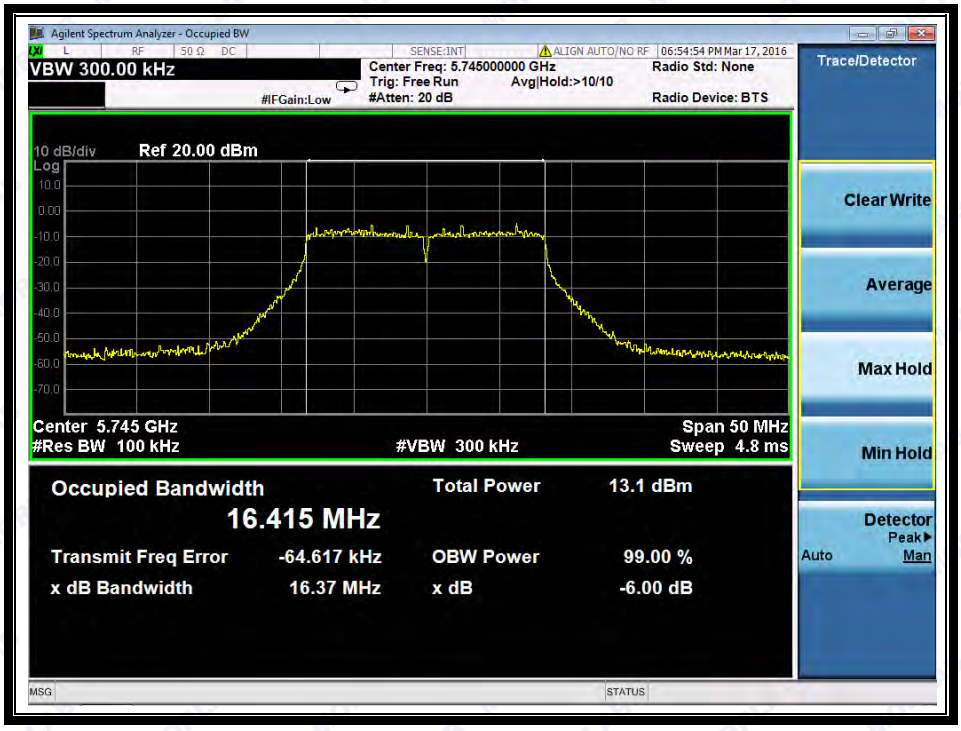
(Channel 36: 5180MHz @ 802.11a Antenna 1)



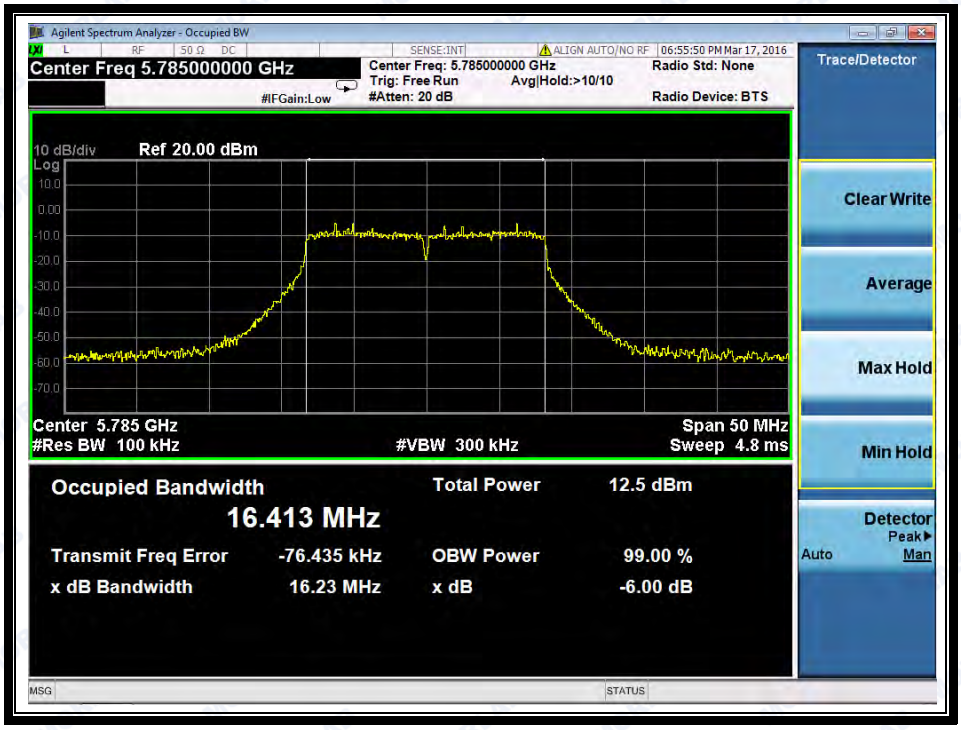
(Channel 44: 5220 MHz @ 802.11a Antenna 1)



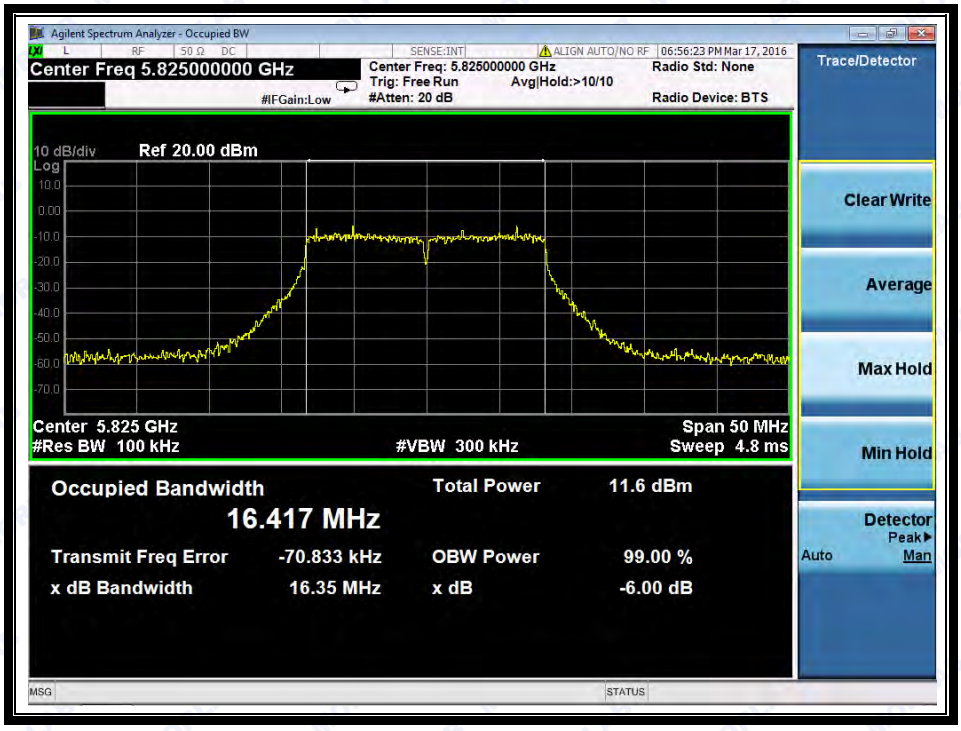
(Channel 48: 5240MHz @ 802.11a Antenna 1)



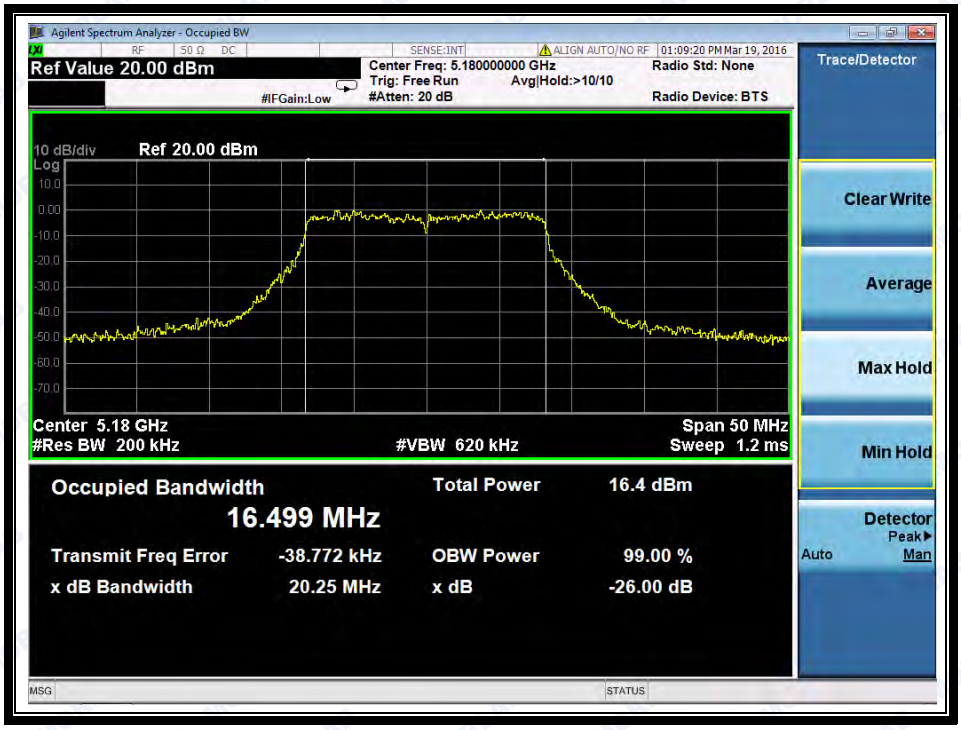
(Channel 149: 5745MHz @ 802.11a Antenna 1)



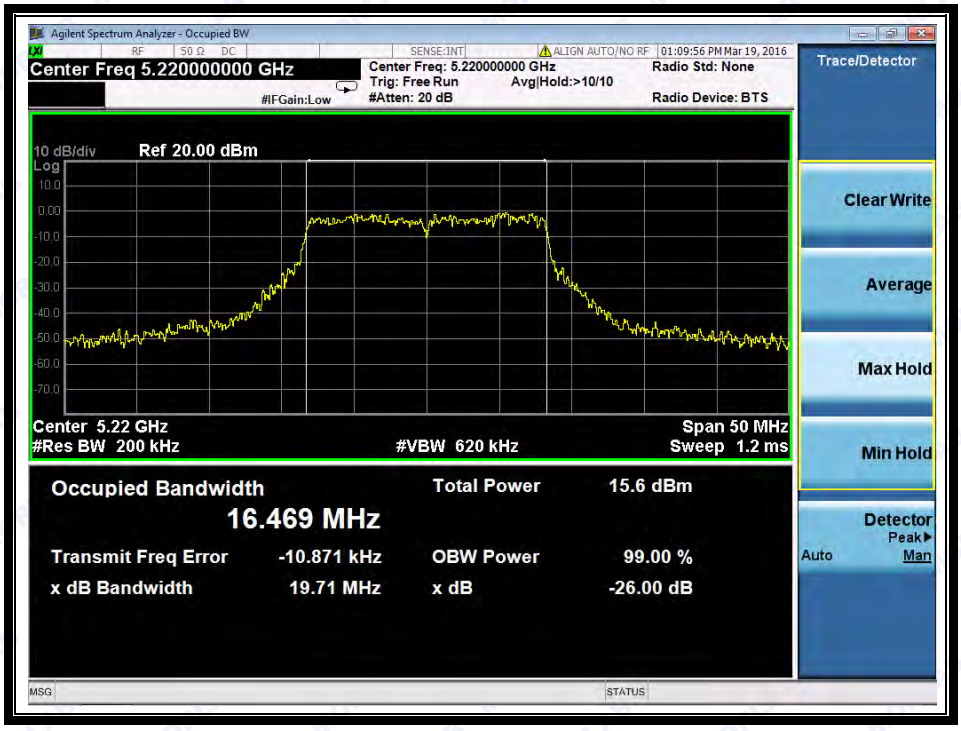
(Channel 157: 5785MHz @ 802.11a Antenna 1)



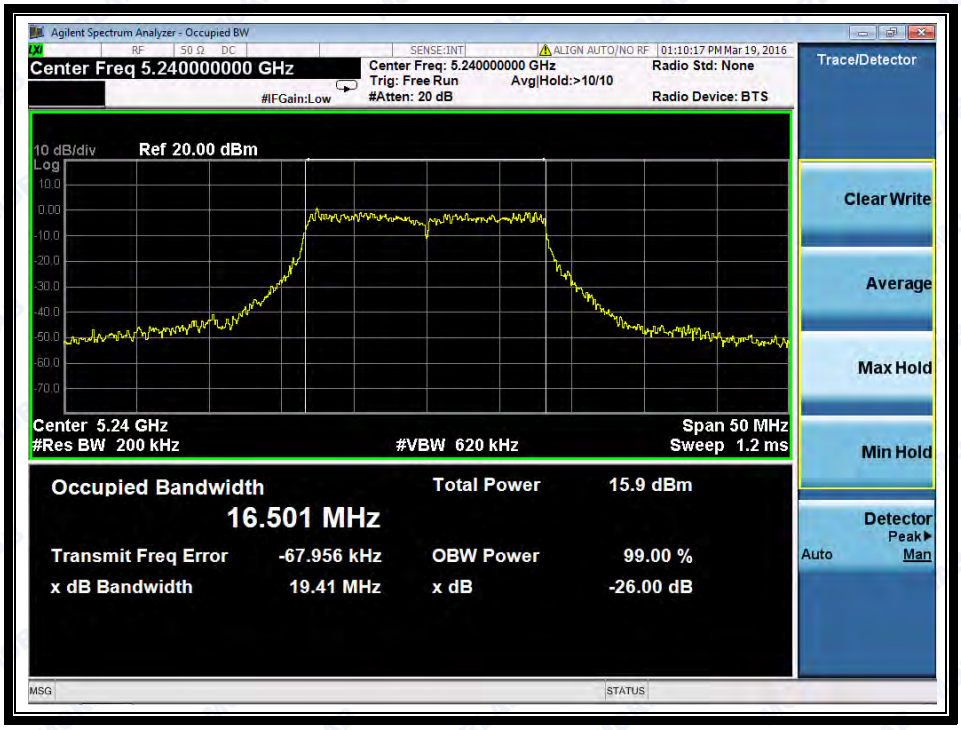
(Channel 165: 5825MHz @ 802.11a Antenna 1)



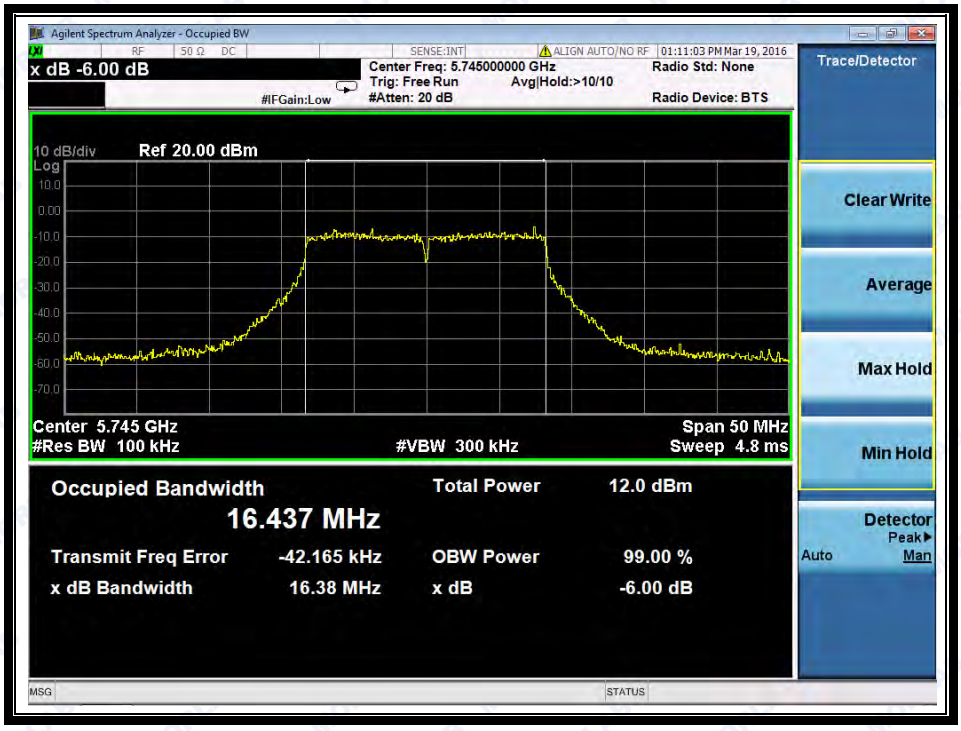
(Channel 36: 5180MHz @ 802.11a Antenna 2)



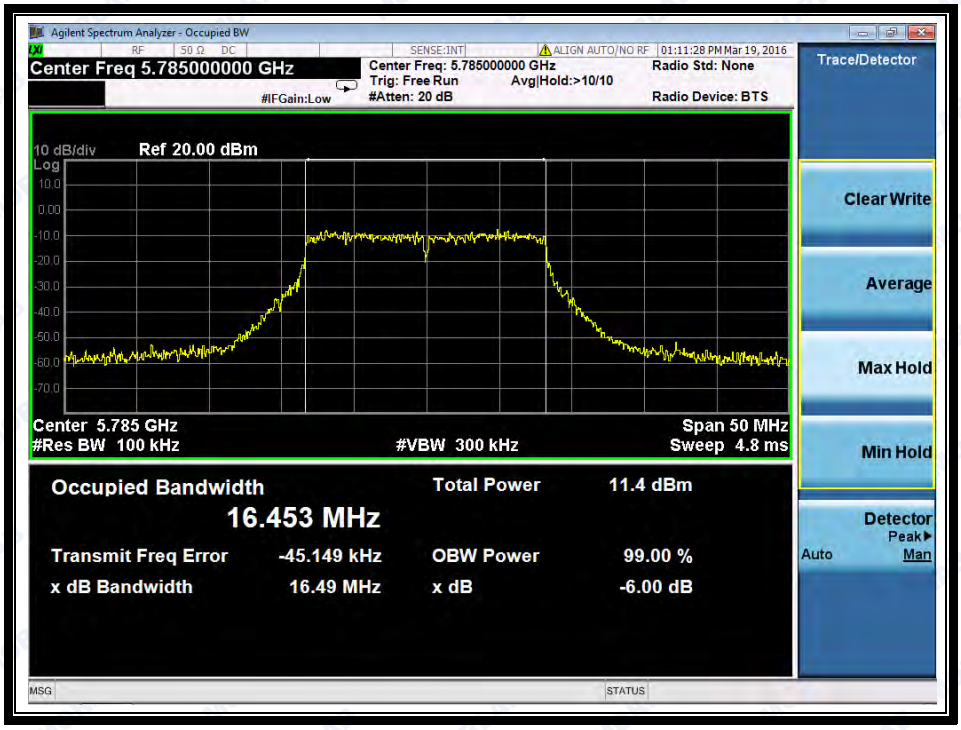
(Channel 44: 5220 MHz @ 802.11a Antenna 2)



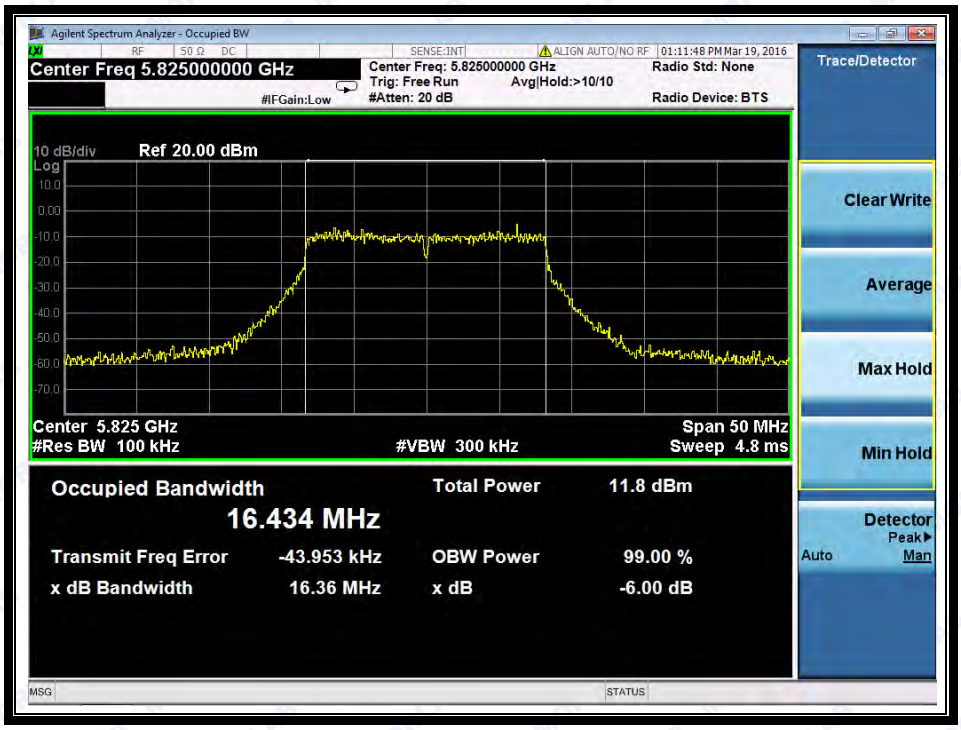
(Channel 48: 5240MHz @ 802.11a Antenna 2)



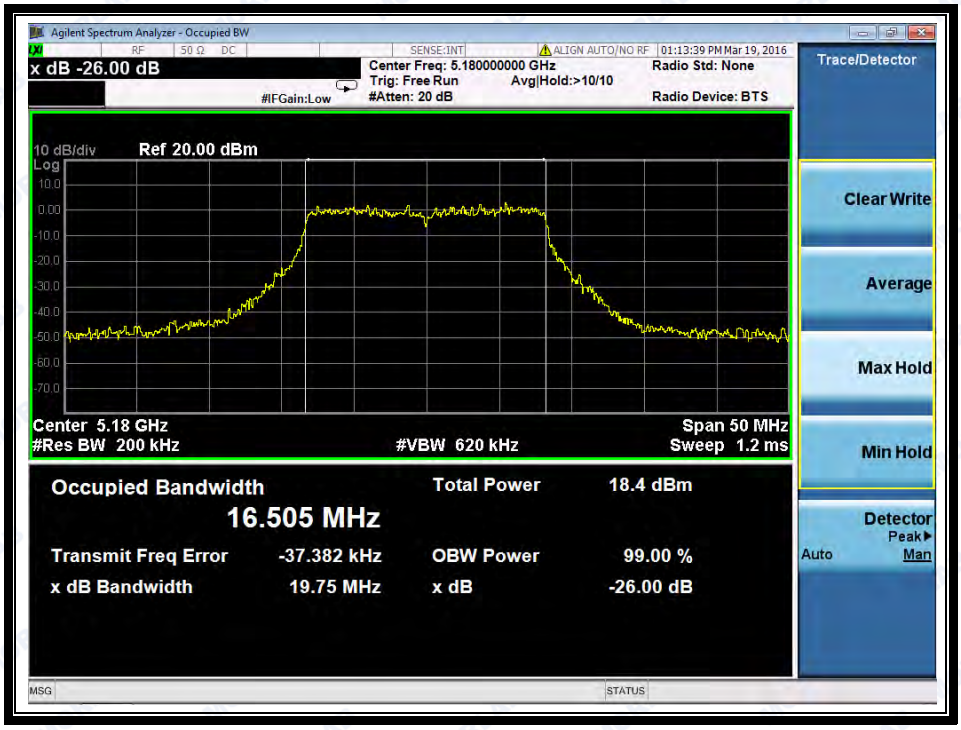
(Channel 149: 5745MHz @ 802.11a Antenna 2)



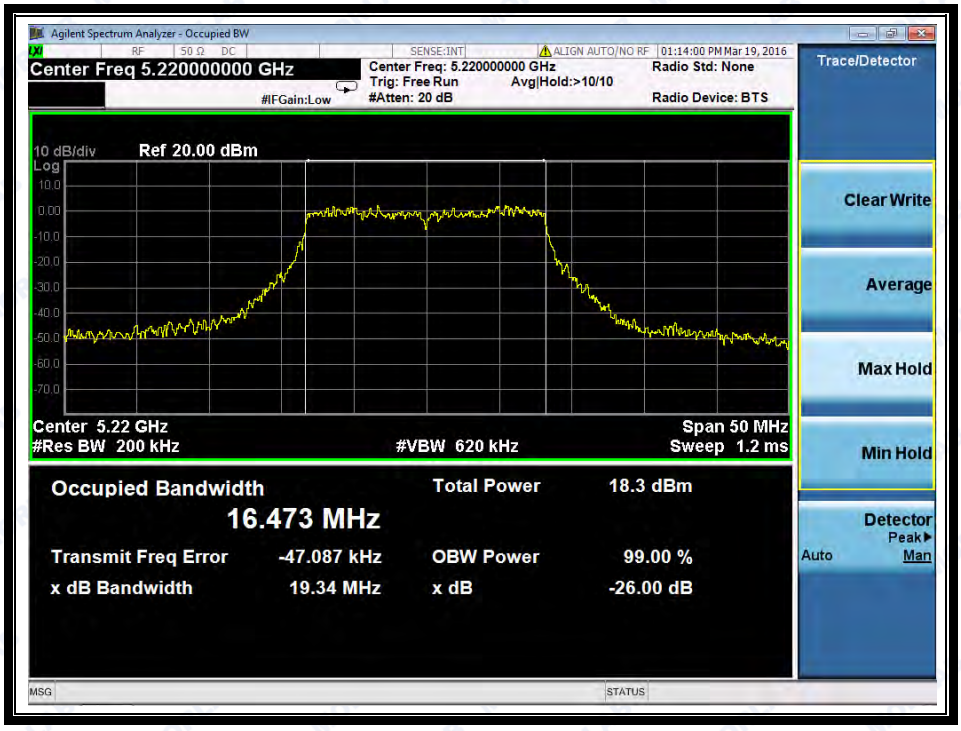
(Channel 157: 5785MHz @ 802.11a Antenna 2)



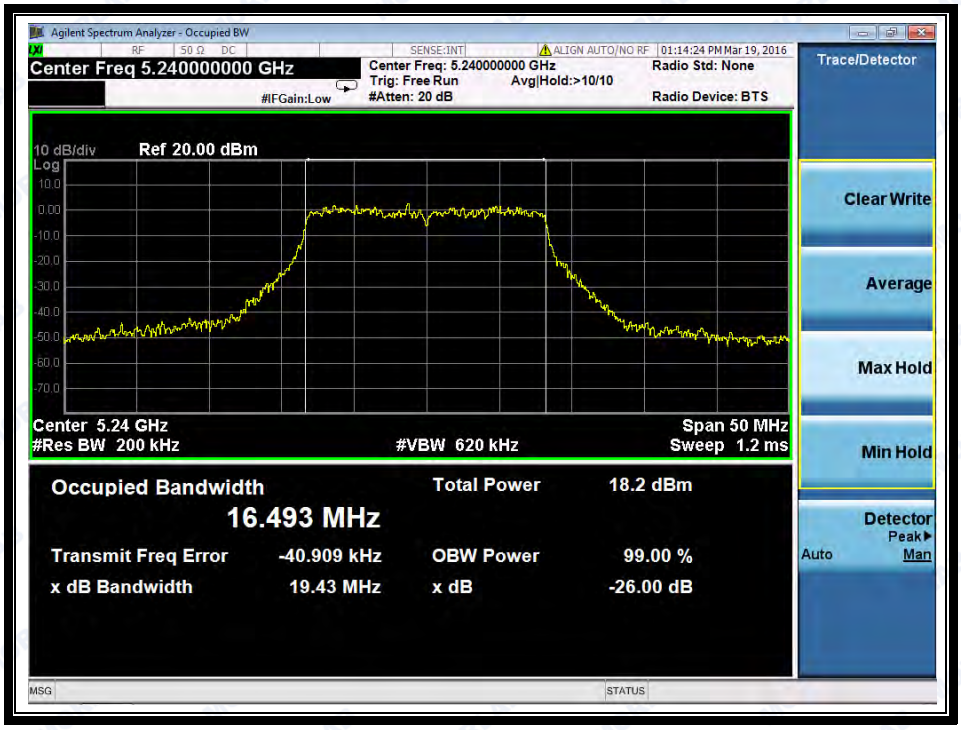
(Channel 165: 5825MHz @ 802.11a Antenna 2)



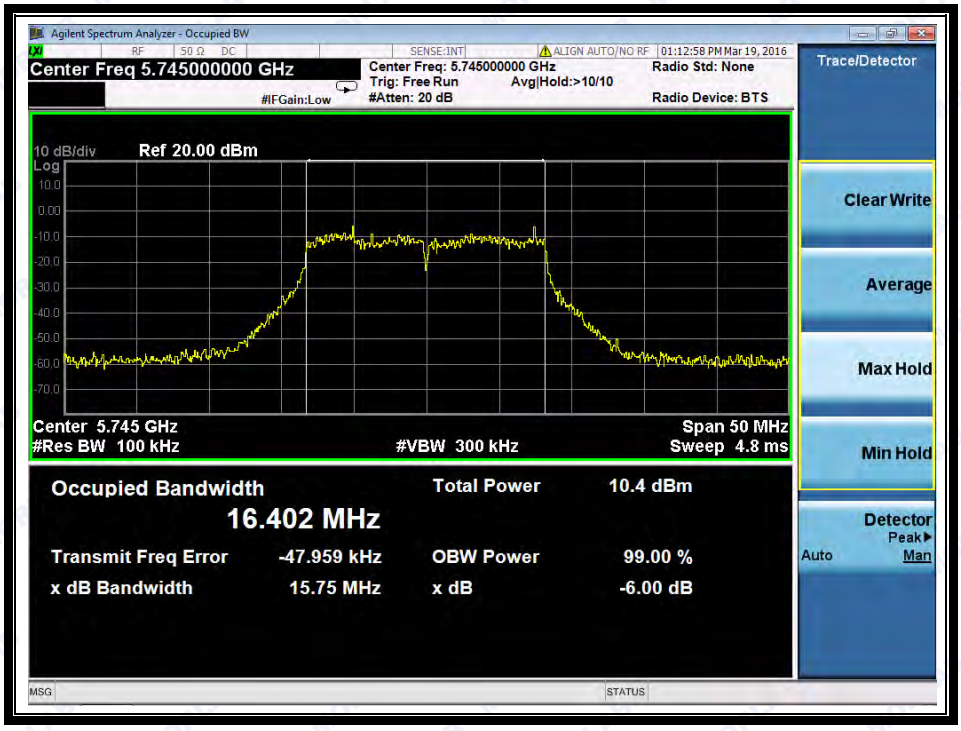
(Channel 36: 5180MHz @ 802.11a Antenna 3)



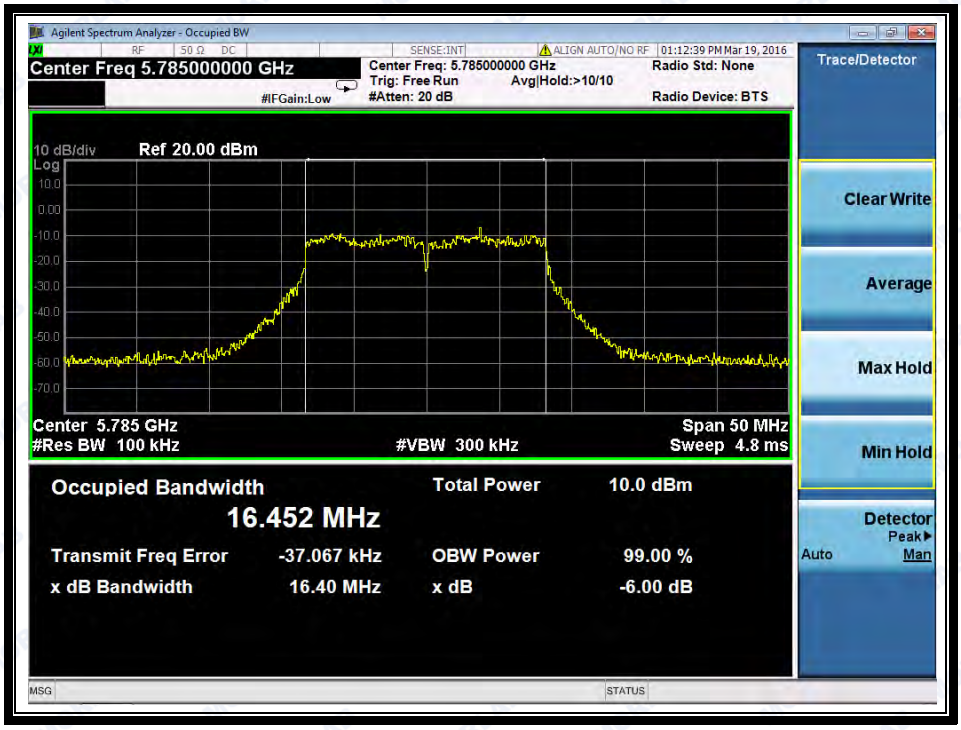
(Channel 44: 5220 MHz @ 802.11a Antenna 3)



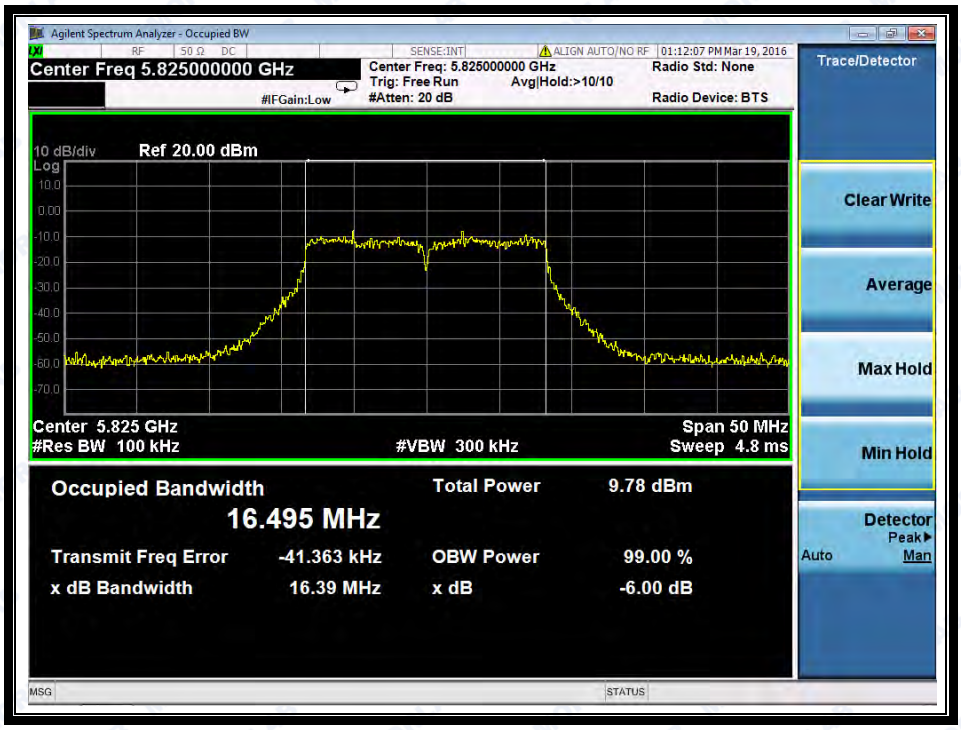
(Channel 48: 5240MHz @ 802.11a Antenna 3)



(Channel 149: 5745MHz @ 802.11a Antenna 3)



(Channel 157: 5785MHz @ 802.11a Antenna 3)



(Channel 165: 5825MHz @ 802.11a Antenna 3)

2.3 Maximum conducted output Power

2.3.1 Requirement

(1) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi.

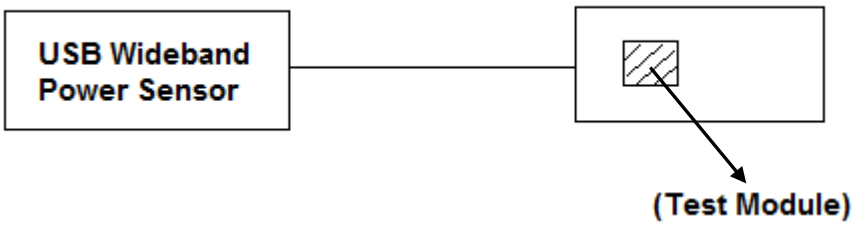
(2) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

Note: If transmitting antennas of directional gain greater than 6dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

2.3.2 Test Description

Section E) 3) of KDB 789033 defines a methodology using a USB Wideband Power Sensor.

A. Test Setup:



The EUT (Equipment under the test) which is powered by adapter is coupled to the USB Wideband Power Sensor; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading, all test result in power meter.

2.3.3 Test Result

2.3.3.1 802.11ac-20MHz Test mode

Antenna 1:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
36	5180	13.33	30	PASS
44	5220	12.95		
48	5240	12.47		
149	5745	4.97	30	
157	5785	4.23		
165	5825	3.51		

Antenna 2:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
36	5180	19.32	30	PASS
44	5220	19.53		
48	5240	19.39		
149	5745	14.23	30	
157	5785	15.03		
165	5825	14.23		

Antenna 3:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
36	5180	12.21	30	PASS
44	5220	11.96		
48	5240	11.76		
149	5745	1.83	30	
157	5785	1.78		
165	5825	1.26		

Antenna 1+ Antenna 2 + Antenna 3:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
36	5180	20.92	$28.63_{Note\ 2}$	PASS
44	5220	20.98		
48	5240	20.78		
149	5745	14.93	$28.63_{Note\ 2}$	
157	5785	15.56		
165	5825	14.78		

2.3.3.2 802.11ac-40MHz Test mode

Antenna 1:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
38	5190	12.36	30	PASS
46	5230	12.14		
151	5755	3.84	30	
159	5795	3.81		

Antenna 2:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
38	5190	17.52	30	PASS
46	5230	17.72		
151	5755	12.52	30	
159	5795	12.13		

Antenna 3:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
38	5190	11.22	30	PASS
46	5230	10.71		
151	5755	7.32	30	
159	5795	6.89		

Antenna 1 + Antenna 2 + Antenna 3:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
38	5190	19.39	$28.63_{Note\ 2}$	PASS
46	5230	19.41		
151	5755	14.10	$28.63_{Note\ 2}$	
159	5795	12.99		

2.3.3.3 802.11ac-80MHz Test mode

Antenna 1:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
42	5210	11.58	30	PASS
155	5775	3.21	30	

Antenna 2:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
42	5210	18.79	30	PASS
155	5775	13.25	30	

Antenna 3:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
42	5210	11.65	30	PASS
155	5775	1.12	30	

Antenna 1 + Antenna 2 + Antenna 3:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
42	5210	20.20	28.63Note 2	PASS
155	5775	13.90	28.63Note 2	

2.3.3.4 802.11n-20MHz Test mode

Antenna 1:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
36	5180	13.42	30	PASS
44	5220	12.68		
48	5240	12.58		
149	5745	4.88	30	
157	5785	5.03		
165	5825	4.52		

Antenna 2:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
36	5180	18.22	30	PASS
44	5220	18.62		
48	5240	19.07		
149	5745	13.63	30	
157	5785	13.75		
165	5825	14.56		

Antenna 3:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
36	5180	12.36	30	PASS
44	5220	12.08		
48	5240	11.85		
149	5745	2.06	30	
157	5785	2.41		
165	5825	1.48		

Antenna 1 + Antenna 2 + Antenna 3:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
36	5180	20.24	28.63Note 2	PASS
44	5220	20.31		
48	5240	20.57		
149	5745	14.43	28.63Note 2	
157	5785	14.57		
165	5825	15.16		

2.3.3.5 802.11n-40MHz Test mode

Antenna 1:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
38	5190	12.42	30	PASS
46	5230	11.98		
151	5755	3.86	30	
159	5795	3.39		

Antenna 2:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
38	5190	18.14	30	PASS
46	5230	18.03		
151	5755	13.18	30	
159	5795	13.52		

Antenna 3:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
38	5190	11.26	30	PASS
46	5230	10.89		
151	5755	1.31	30	
159	5795	1.17		

Antenna 1 + Antenna 2 + Antenna 3:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
38	5190	19.82	28.63Note 2	PASS
46	5230	19.62		
151	5755	13.91	28.63Note 2	
159	5795	14.15		

2.3.3.6 802.11a Test mode

Antenna 1:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
36	5180	14.24	30	PASS
44	5220	13.02		
48	5240	12.76		
149	5745	5.36	30	
157	5785	4.62		
165	5825	4.05		

Antenna 2:

Channel	Frequency (MHz)	Measured Average Output Power(dBm)	Limit (dBm)	Verdict
36	5180	19.85	30	PASS
44	5220	19.15		
48	5240	19.68		
149	5745	15.21	30	
157	5785	14.53		
165	5825	14.39		