



REPORT No.: SZ17040257W04

FCC RF TEST REPORT

APPLICANT : Xiamen Candour Co.,Ltd

PRODUCT NAME : TVBOX

MODEL NAME : R92

TRADE NAME : SAMMIX

BRAND NAME : SAMMIX

FCC ID : 2ALOI-R92

STANDARD(S) : 47 CFR Part 15 Subpart E

ISSUE DATE : 2017-06-01

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 Fax: 86-755-36698525
Http://www.morlab.com E-mail: service@morlab.cn



DIRECTORY

TEST REPORT DECLARATION	4
1. GENERAL INFORMATION	5
1.1 EUT DESCRIPTION	5
1.2 TEST STANDARDS AND RESULTS	7
1.3 TEST ENVIRONMENT CONDITIONS	7
2. 47 CFR PART 15E REQUIREMENTS	8
2.1 ANTENNA REQUIREMENT	8
2.1.1 APPLICABLE STANDARD	8
2.1.2 RESULT: COMPLIANT	8
2.2 EMISSION BANDWIDTH	8
2.2.1 REQUIREMENT	8
2.2.2 TEST DESCRIPTION	8
2.2.3 TEST RESULT	10
2.3 MAXIMUM CONDUCTED OUTPUT POWER	37
2.3.1 REQUIREMENT	37
2.3.2 TEST DESCRIPTION	37
2.3.3 TEST RESULT	38
2.4 PEAK POWER SPECTRAL DENSITY	41
2.4.1 REQUIREMENT	41
2.4.2 TEST DESCRIPTION	41
2.4.3 TEST RESULT	42
2.5 RESTRICTED FREQUENCY BANDS	69
2.5.1 REQUIREMENT	69
2.5.2 TEST DESCRIPTION	69
2.5.3 TEST RESULT	70
2.6 FREQUENCY STABILITY	93
2.6.1 REQUIREMENT	93
2.6.2 TEST PROCEDURE	93
2.6.3 TEST RESULT	93
2.7 TRANSMIT POWER CONTROL (TPC) AND DYNAMIC FREQUENCY SELECTION (DFS)	96
2.7.1 REQUIREMENT	96



2.7.1.1	MASTER DEVICES.....	97
2.7.1.2	CLIENT DEVICES	98
2.7.1.3	DFS DETECTION THRESHOLDS.....	98
2.7.1.4	RESPONSE REQUIREMENTS	99
2.7.2	TEST DESCRIPTION	99
2.7.3	TEST RESULT.....	101
2.7.3.1	RADAR TEST WAVEFORMS ARE INJECTED INTO THE MASTER:	101
2.7.3.2	EUT IS A CLIENT DEVICE WITHOUT RADAR DETECTION :.....	101
2.7.3.3	TEST PLOTS.....	101
2.7.3.4	TEST PHOTO FOR DFS.....	103
2.8	CONDUCTED EMISSION.....	104
2.8.1	REQUIREMENT.....	104
2.8.2	TEST DESCRIPTION	104
2.8.3	TEST RESULT.....	105
2.9	RADIATED EMISSION	107
2.9.1	REQUIREMENT.....	107
2.9.2	TEST DESCRIPTION	108
2.9.3	TEST RESULT.....	111
2.10	RF EXPOSURE EVALUATION	169
2.10.1	REQUIREMENT.....	169
2.10.2	RESULT.....	169
<u>ANNEX A GENERAL INFORMATION</u>		<u>170</u>

Change History		
Issue	Date	Reason for change
1.0	2017-06-01	First edition



REPORT No.: SZ17040257W04

TEST REPORT DECLARATION

Applicant	Xiamen Candour Co.,Ltd
Applicant Address	19/F,C&D International Building.,No.1699 East Huandao Road, Xiamen 361008, China
Manufacturer	Xiamen Candour Co.,Ltd
Manufacturer Address	19/F,C&D International Building.,No.1699 East Huandao Road, Xiamen 361008, China
Product Name	TVBOX
Model Name	R92
Brand Name	SAMMIX
HW Version	MYROPE_S_V2.0
SW Version	V01_160301_CTA
Test Standards	47 CFR Part 15 Subpart E
Test Date	2017-05-10 to 2017-05-20
Test Result	PASS

Tested by : Su Hang
Su Hang (Test Engineer)

Approved by : Qiu Xiaojun
Qiu Xiaojun (Supervisor)



1. GENERAL INFORMATION

1.1 EUT Description

Product Name	Xiamen Candour Co.,Ltd
Serial No.	(n.a, marked #1 by test site)
Hardware Version	MYROPE_S_V2.0
Software Version	V01_160301_CTA
Applicant	Xiamen Candour Co.,Ltd 19/F,C&D International Building.,No.1699 East Huandao Road, Xiamen 361008, China
Manufacturer	Xiamen Candour Co.,Ltd 19/F,C&D International Building.,No.1699 East Huandao Road, Xiamen 361008, China
Frequency Range	802.11b/g/n: 2.400GHz - 2.4835GHz 802.11ac/n: 5.150GHz- 5.250GHz 5.25 GHz -5.35 GHz 5.47 GHz -5.725 GHz 5.725GHz- 5.850GHz
Channel Number	Refer Note(2)
Modulation Type	DSSS, OFDM
Antenna Type	FPCAntenna
Antenna Gain	1.6 dBi

Note 1: The U-NII band is applicable to this report, another bands of operation (2.4GHz) is documented in a separate report.

Note 2 : 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				5250~5350MHz			
Channel Number	36	40	44	48	52	56	60	64
Frequency (MHz)	5180	5200	5220	5240	5260	5280	5300	5320

Frequency Range	5470~5725MHz										
Channel Number	100	105	108	112	116	120	124	128	132	136	140
Frequency (MHz)	5500	5520	5540	5560	5580	5600	5620	5640	5660	5680	5700

Frequency Range	5725~5850MHz				
Channel Number	149	153	157	161	165
Frequency (MHz)	5745	5765	5785	5805	5825

**40MHz Bandwidth:**

Frequency Range	5150~5250 MHz		5250~5350 MHz	
Channel Number	38	46	54	62
Frequency (MHz)	5190	5230	5270	5310

Frequency Range	5470~5725MHz					
Channel Number	102	110	118	126	134	142
Frequency (MHz)	5510	5550	5590	5630	5670	5710

Frequency Range	5725~5850 MHz					
Channel Number	151	159				
Frequency (MHz)	5755		5795			

80MHz Bandwidth:

Frequency Range	5150~5250MHz	5250~5350MHz
Channel Number	42	58
Frequency (MHz)	5210	5290

Frequency Range	5470~5725MHz		5725~5850MHz	
Channel Number	106	122	138	155
Frequency (MHz)	5530	5610	5690	5775

Note 3: During test, the duty cycle of the EUT was setting to 100%.

Note 4: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

Note 5: 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 (5-1-14 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	<u>PASS</u>
2	15.407(a) (e)	Emission Bandwidth	<u>PASS</u>
3	15.407(a)	Maximum conducted output Power	<u>PASS</u>
4	15.407(a)	Peak Power spectral density	<u>PASS</u>
5	15.407(b)	Restricted Frequency Bands	<u>PASS</u>
6	15.407(g)	Frequency Stability	<u>PASS</u>
7	15.407(h)	TPC and DFS	<u>PASS</u> (Note)
8	15.207	Conducted Emission	<u>PASS</u>
9	15.407(b)	Radiated Emission	<u>PASS</u>
10	15.407(f)	RF exposure evaluation	<u>PASS</u>

Note: WIFI hotspot does not support U-NII band; A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

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 v01r04 (05/02/2017), KDB905462 D02 v02 (04/08/2016) and KDB644545 D03 v01 (08/14/2014).

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.

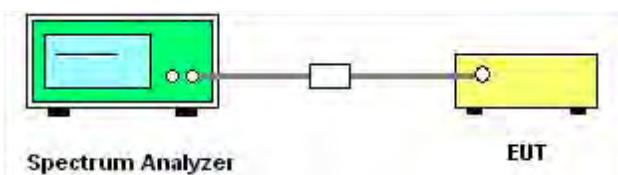
2.2 Emission Bandwidth

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 battery, 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) $\geq 3 \times$ 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 Module.

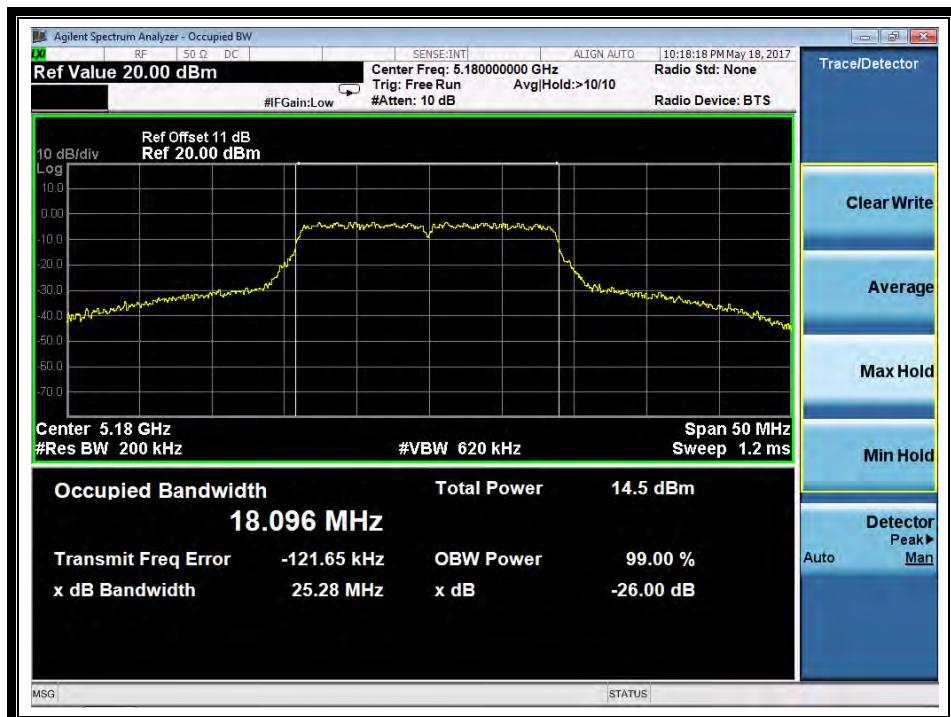
2.2.3.1 802.11ac-20MHz Test mode

A. Test Verdict:

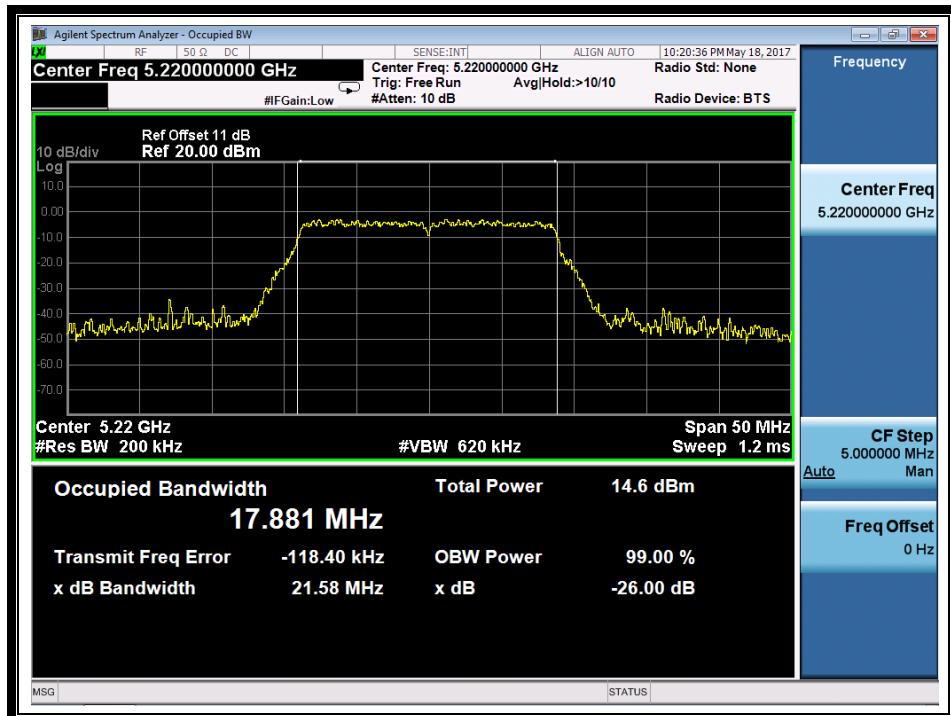
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
36	5180	25.28
44	5220	21.58
48	5240	21.63
52	5260	21.63
60	5300	21.80
64	5320	21.62
100	5500	21.68
116	5600	21.38
140	5700	21.92
Channel	Frequency (MHz)	6dB Bandwidth (MHz)
149	5745	17.65
157	5785	17.65
165	5825	17.65



B. Test Plots



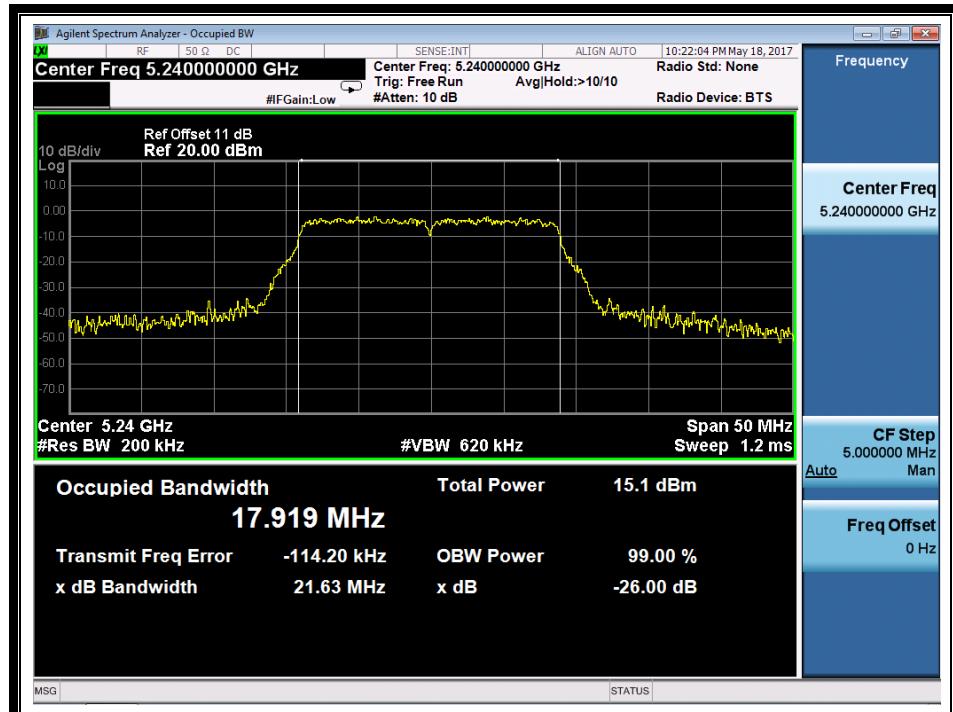
(Channel 36: 5180MHz @ 802.11ac)



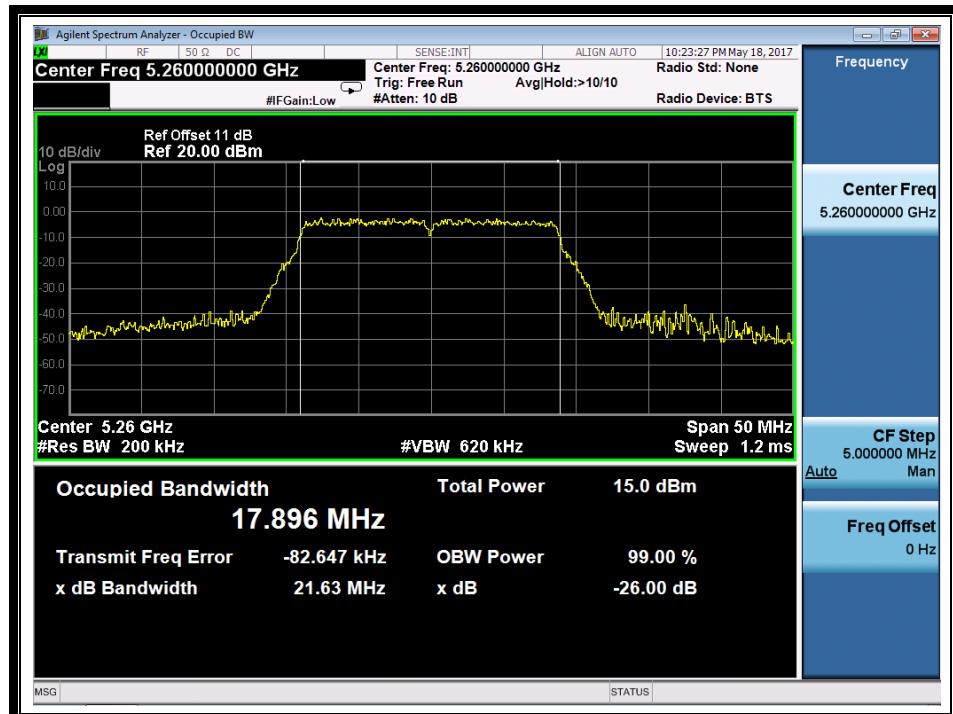
(Channel 44: 5220 MHz @ 802.11ac)



REPORT No.: SZ17040257W04



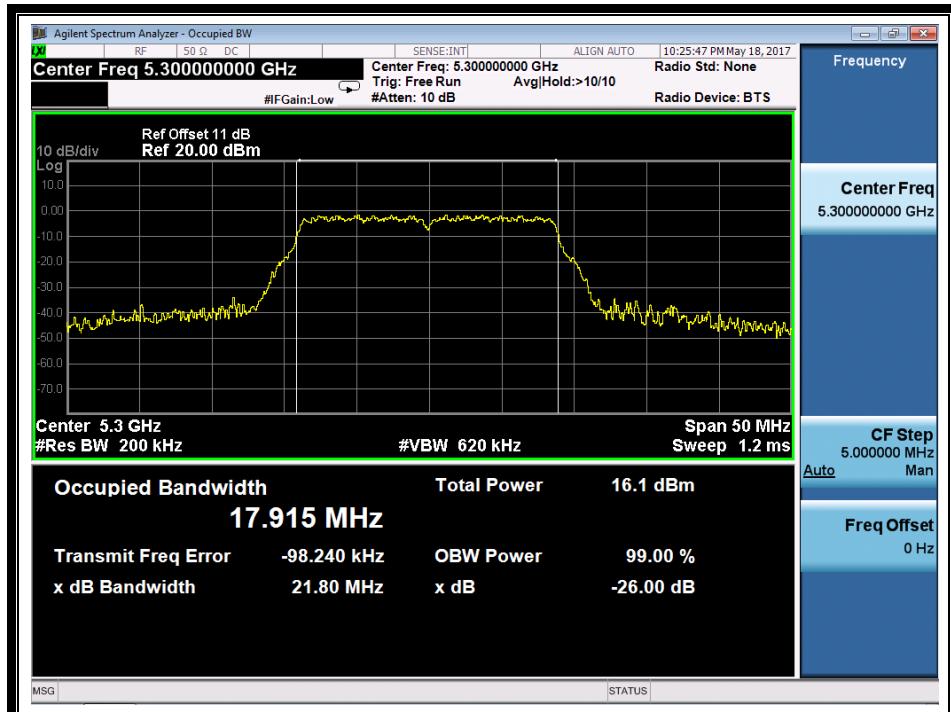
(Channel 48: 5240MHz @ 802.11ac)



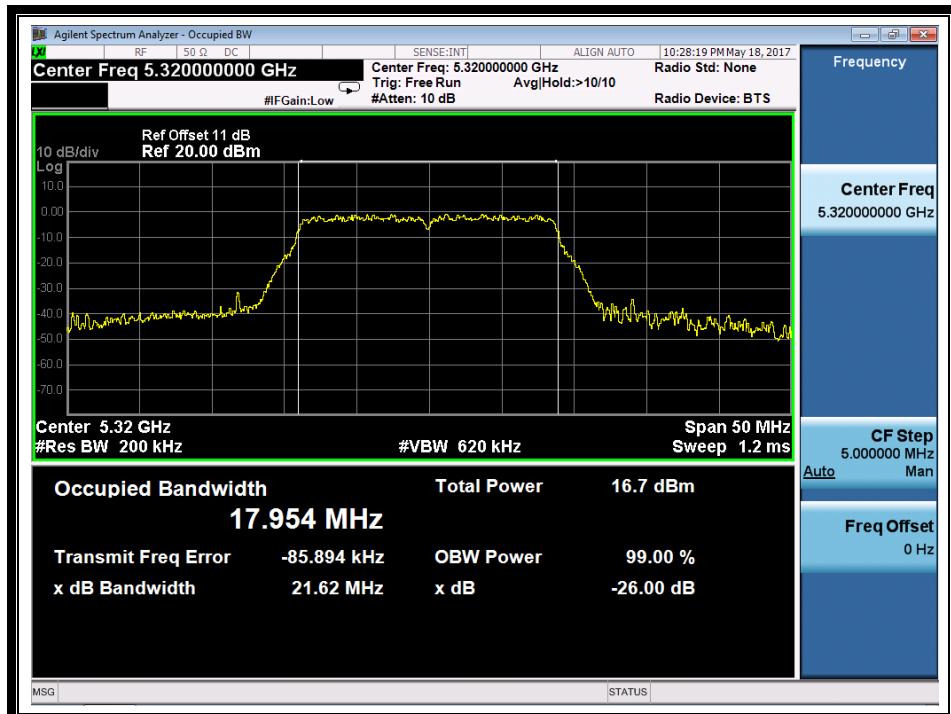
(Channel 52: 5260MHz @ 802.11ac)



REPORT No.: SZ17040257W04



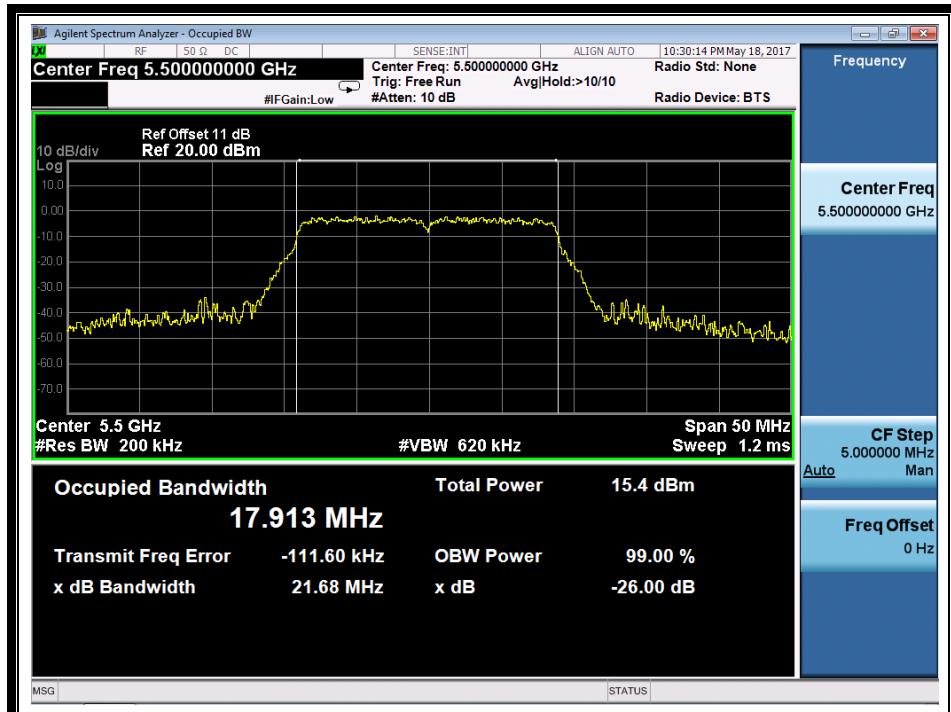
(Channel 60: 5300MHz @ 802.11ac)



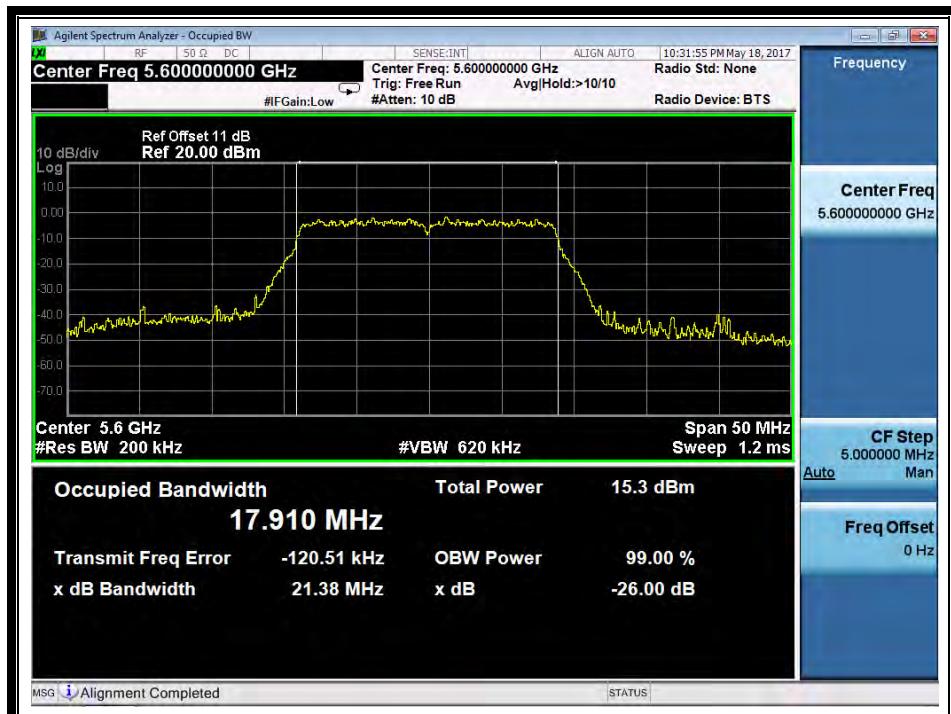
(Channel 64: 5320MHz @ 802.11ac)



REPORT No.: SZ17040257W04



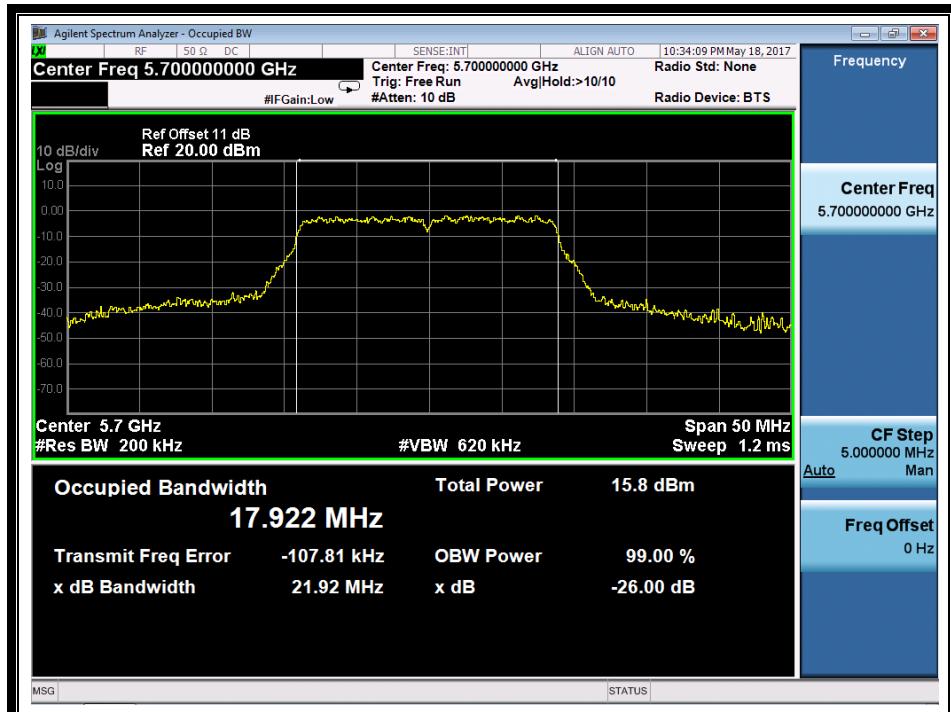
(Channel 100: 5500MHz @ 802.11ac)



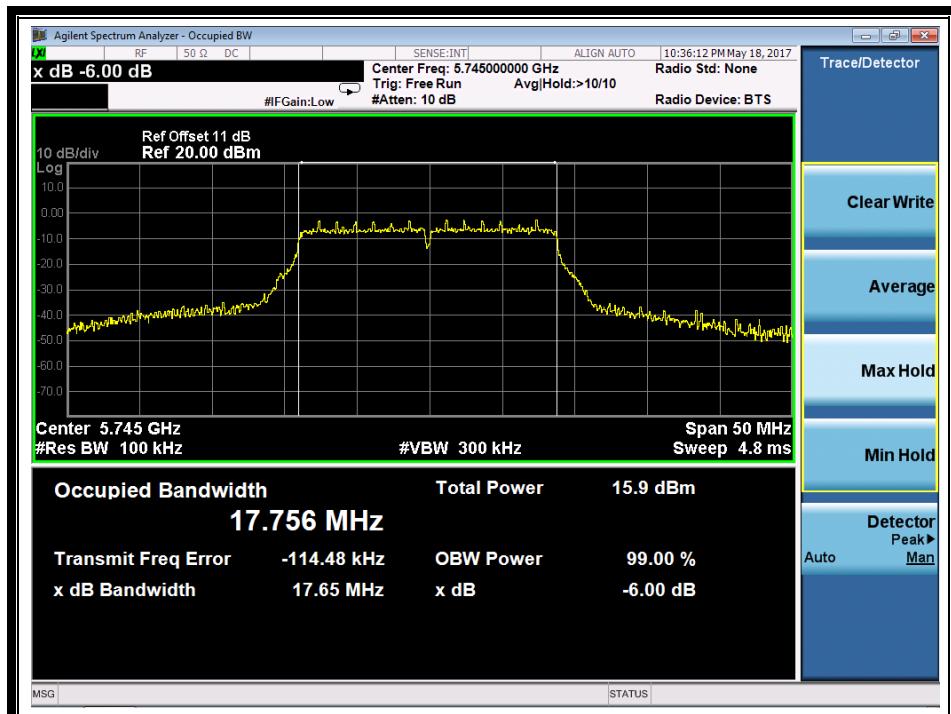
(Channel 120: 5600MHz @ 802.11ac)



REPORT No.: SZ17040257W04



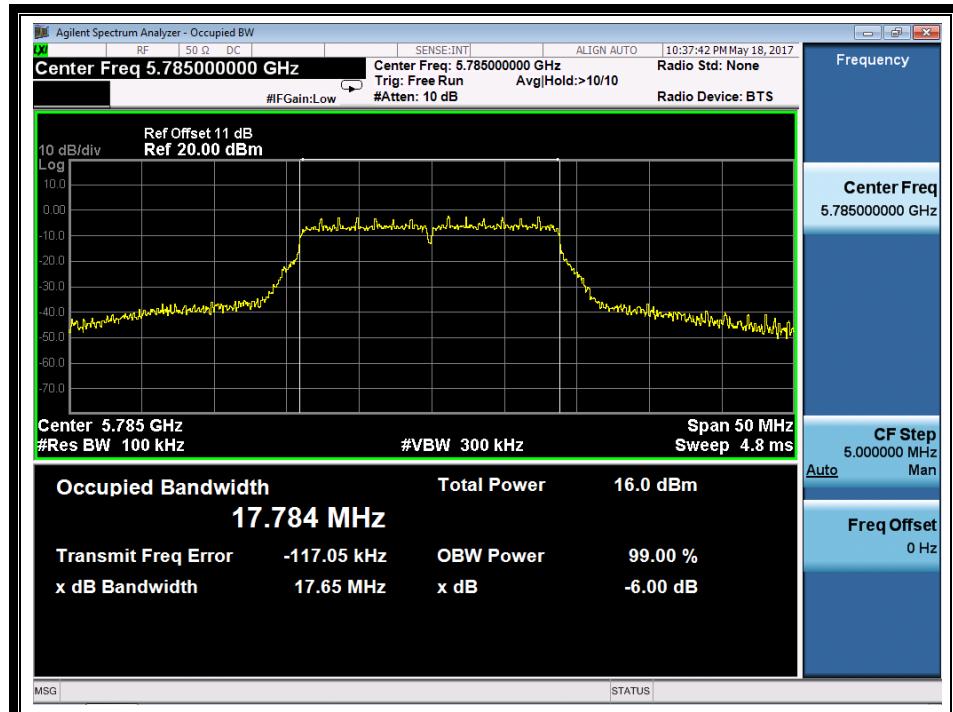
(Channel 140: 5700MHz @ 802.11ac)



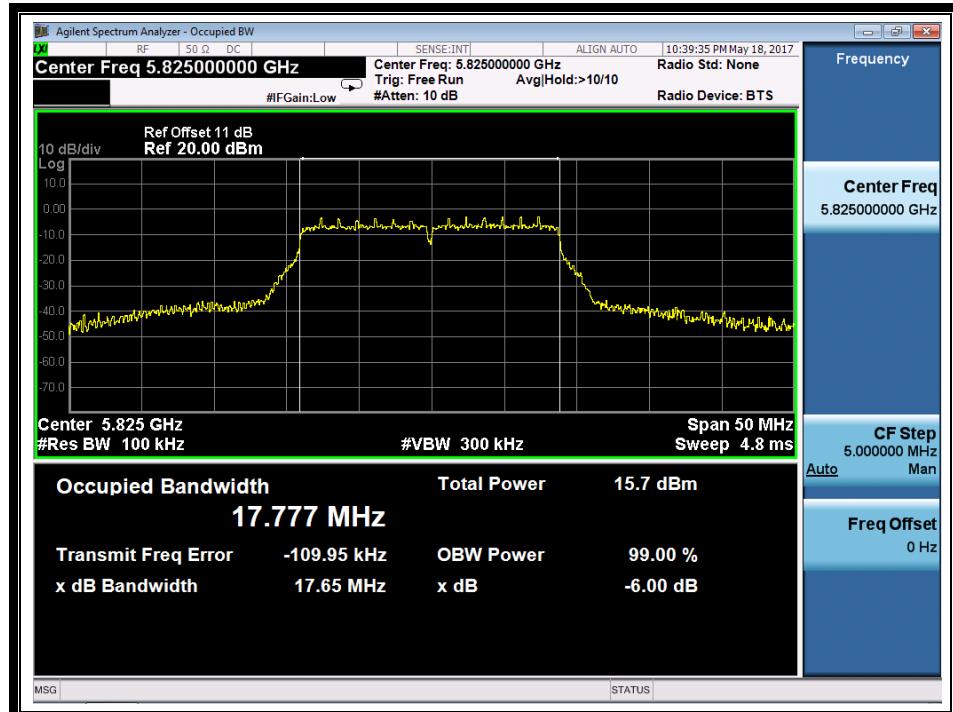
(Channel 149: 5745MHz @ 802.11ac)



REPORT No.: SZ17040257W04



(Channel 157: 5785MHz @ 802.11ac)



(Channel 165: 5825MHz @ 802.11ac)



2.2.3.2 802.11ac-40MHz Test mode

A. Test Verdict:

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
38	5190	49.84
46	5230	40.02
54	5270	39.94
62	5310	40.21
102	5510	40.09
126	5630	40.21
142	5710	40.17
Channel	Frequency (MHz)	6dB Bandwidth (MHz)
151	5755	36.42
159	5795	36.40

B. Test Plots



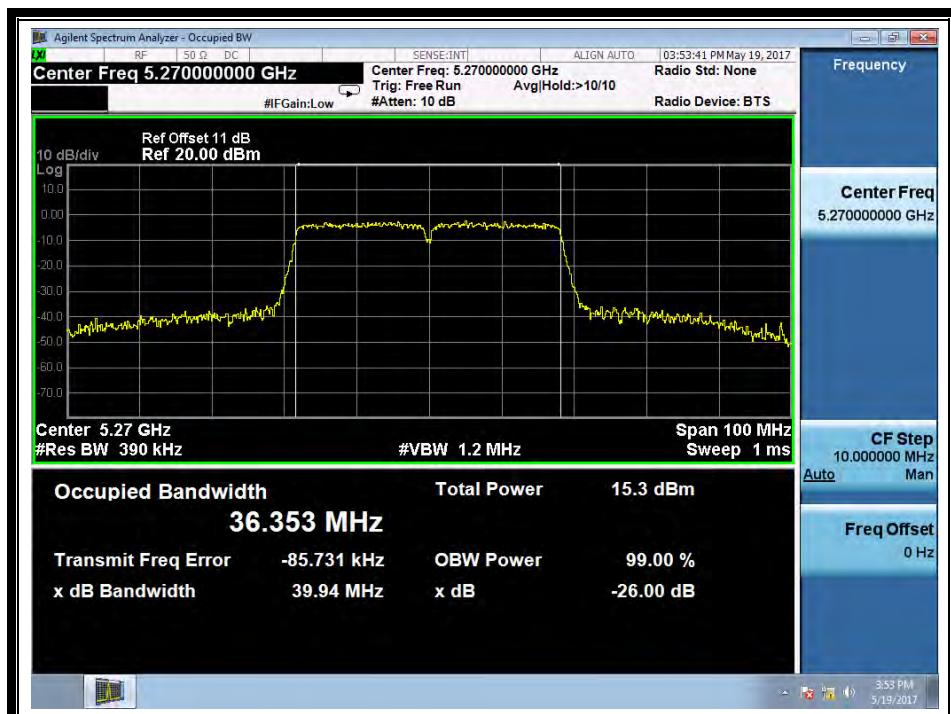
(Channel 38: 5190MHz @ 802.11ac)



REPORT No.: SZ17040257W04



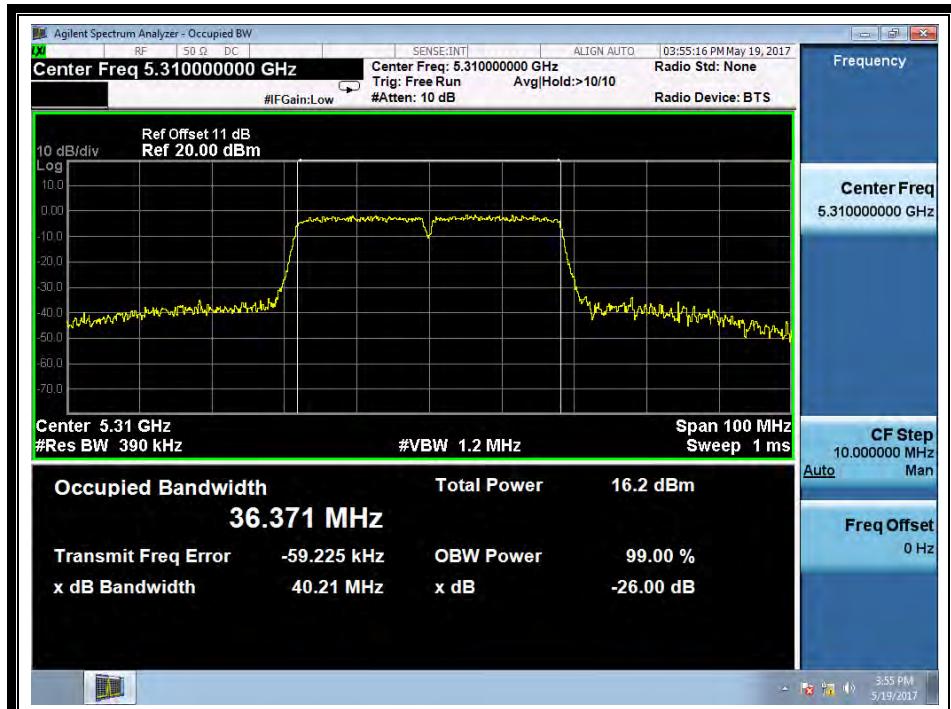
(Channel 46: 5230 MHz @ 802.11ac)



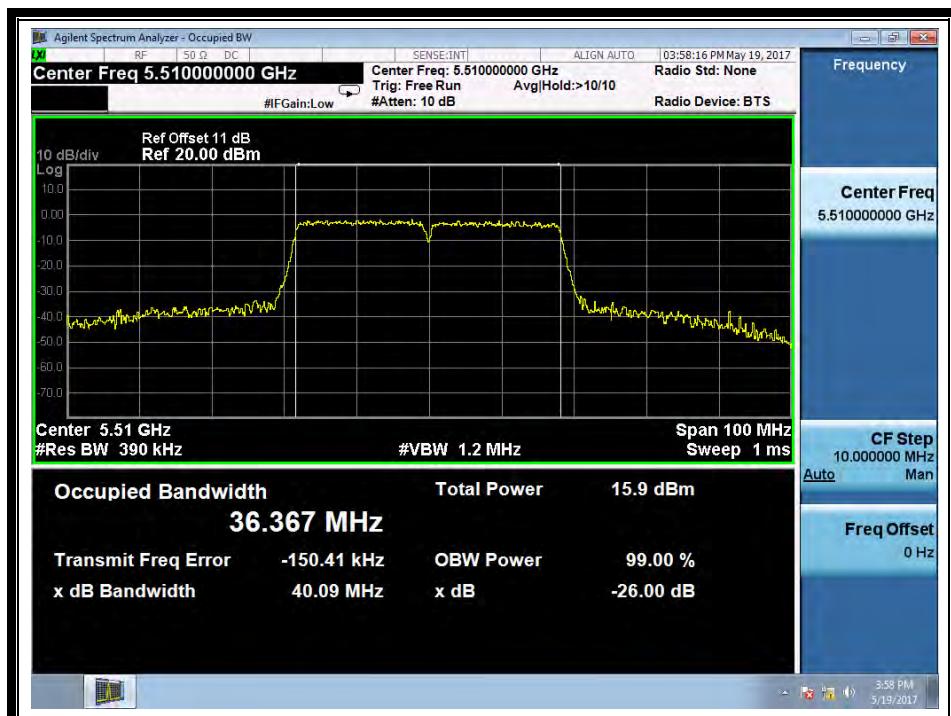
(Channel 54: 5270MHz @ 802.11ac)



REPORT No.: SZ17040257W04



(Channel 62: 5310MHz @ 802.11ac)



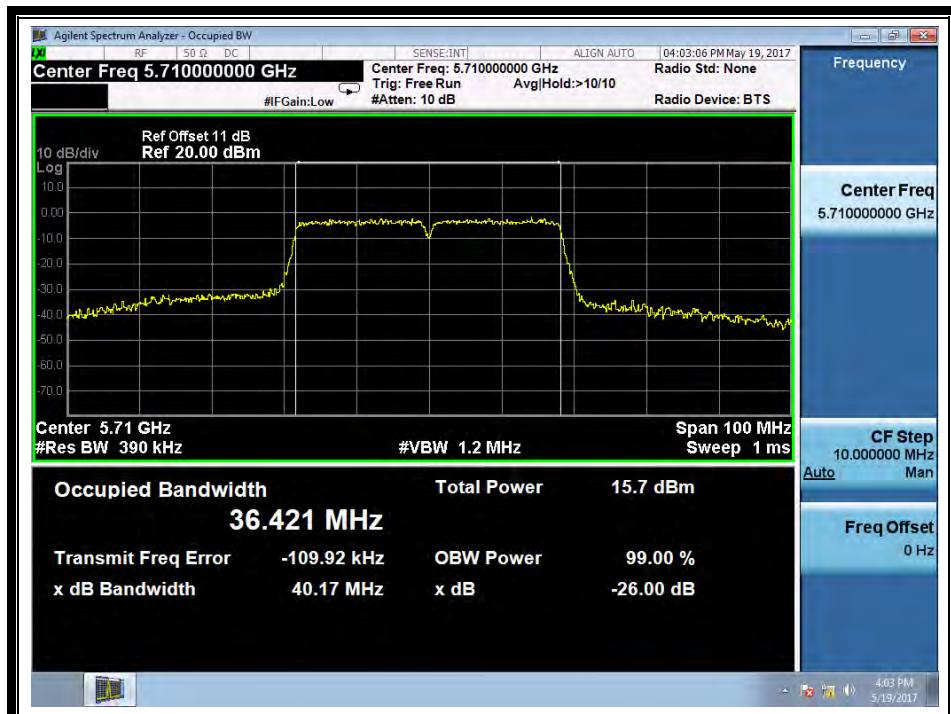
(Channel 102: 5510MHz @ 802.11ac)



REPORT No.: SZ17040257W04



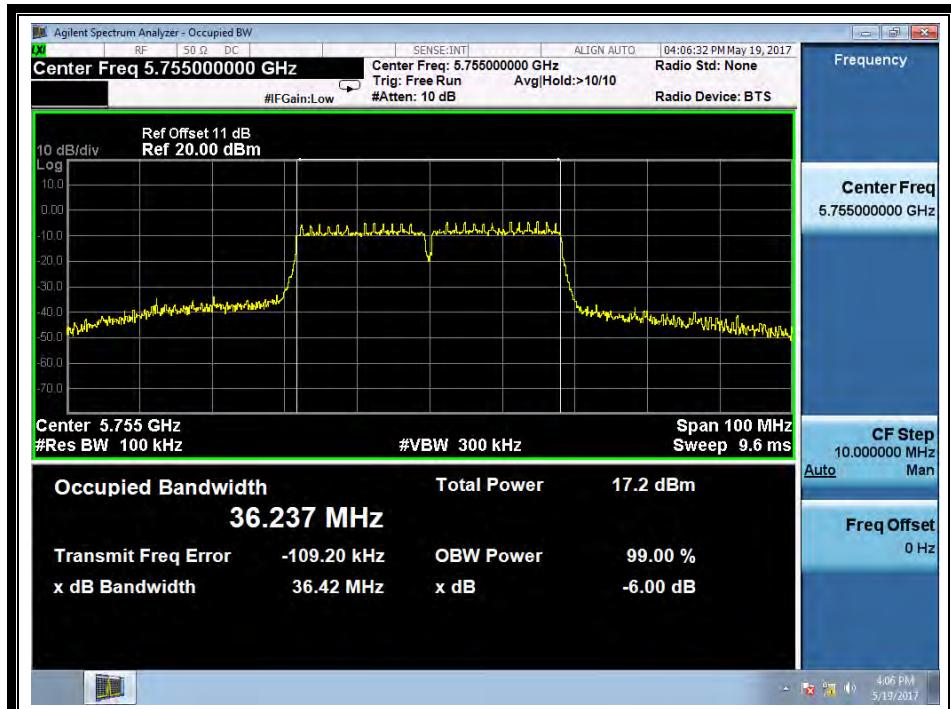
(Channel 126: 5630MHz @ 802.11ac)



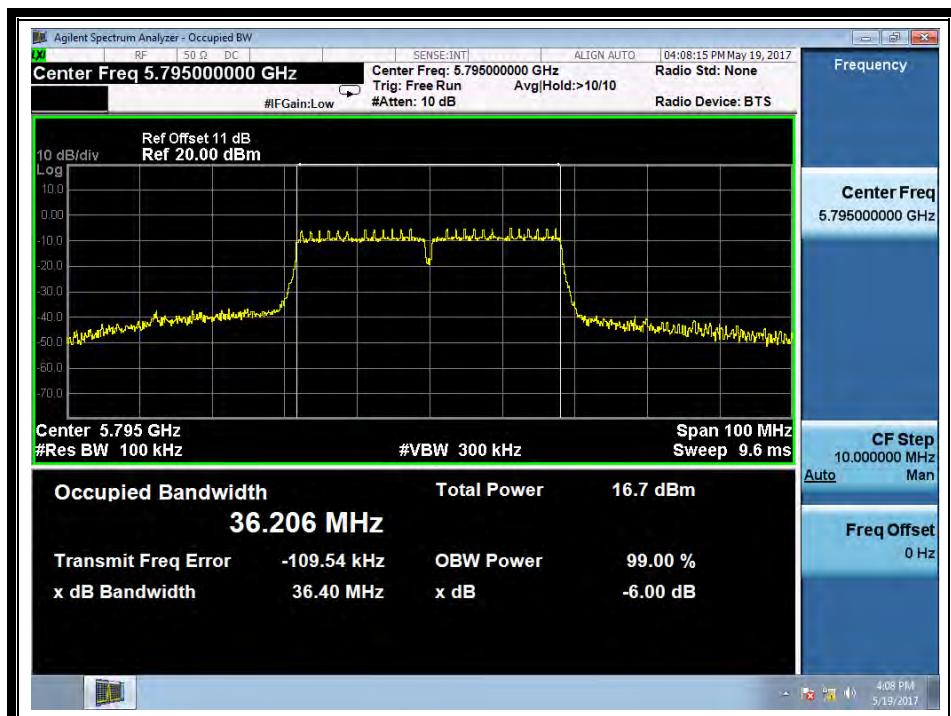
(Channel 142: 5710MHz @ 802.11ac)



REPORT No.: SZ17040257W04



(Channel 151: 5755MHz @ 802.11ac)



(Channel 159: 5795MHz @ 802.11ac)



2.2.3.3 802.11ac-80MHz Test mode

A. Test Verdict:

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
42	5210	127.70
58	5290	156.10
106	5530	92.08
122	5610	94.34
138	5690	110.70
Channel	Frequency (MHz)	6dB Bandwidth (MHz)
155	5775	76.60

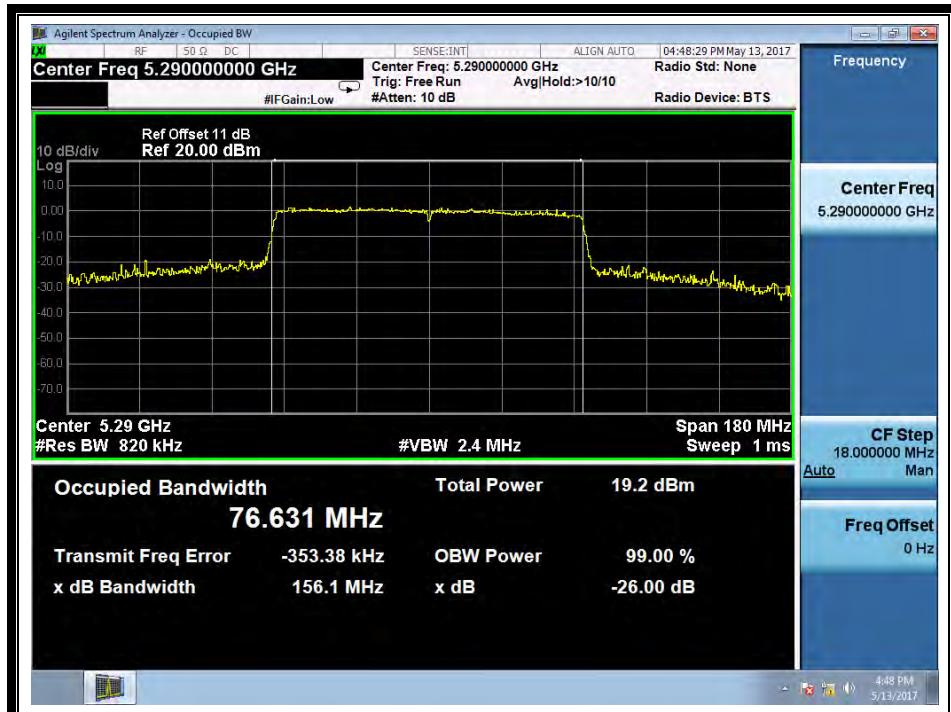
B. Test Plots



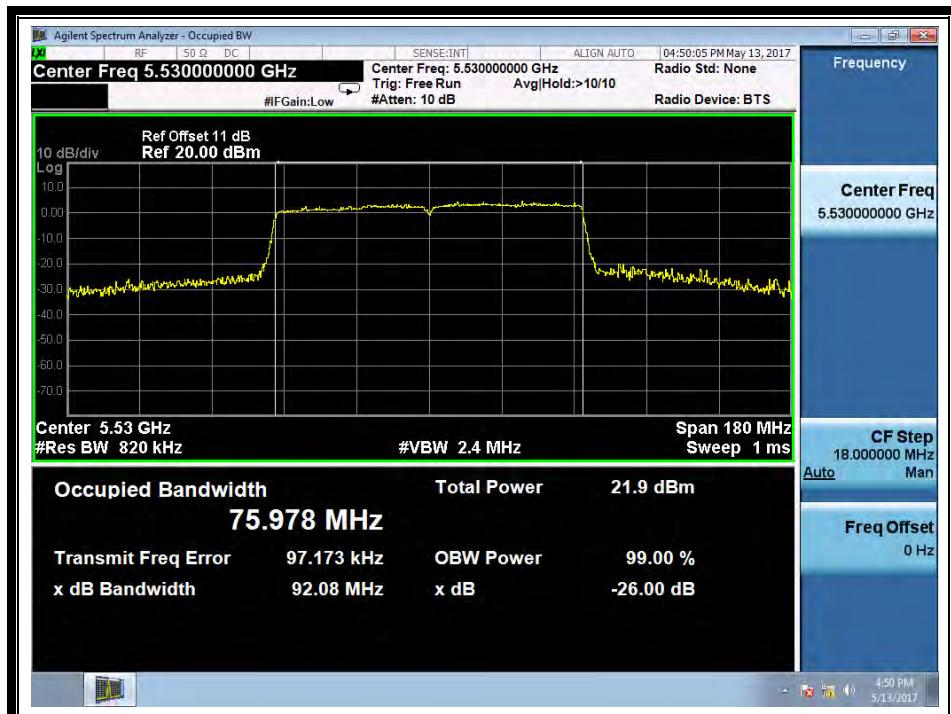
(Channel 42: 5210MHz @ 802.11ac)



REPORT No.: SZ17040257W04



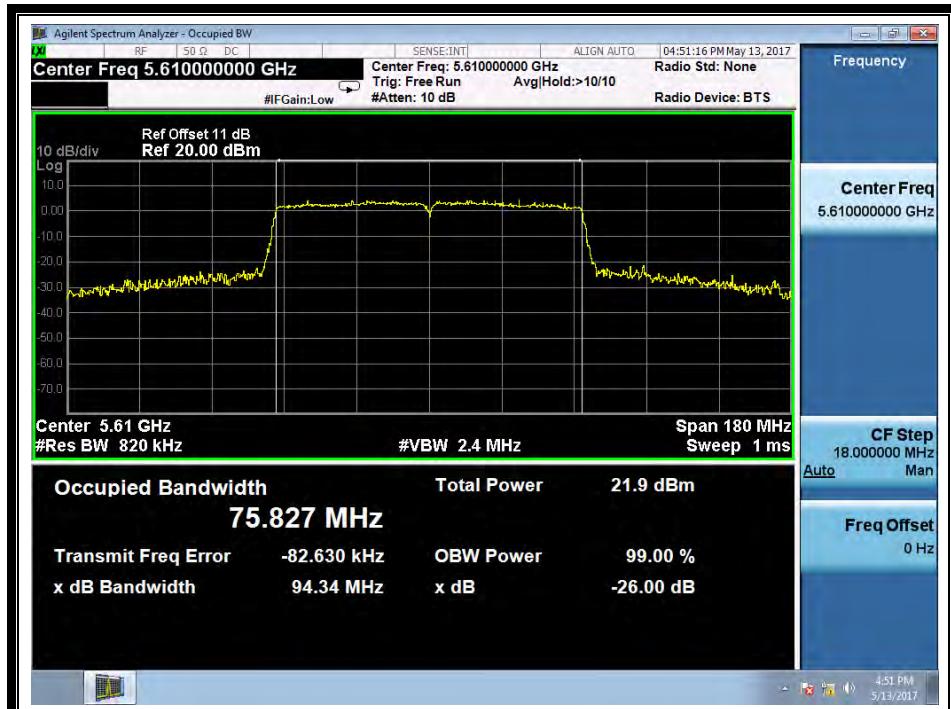
(Channel 58: 5290MHz @ 802.11ac)



(Channel 106: 5530MHz @ 802.11ac)



REPORT No.: SZ17040257W04



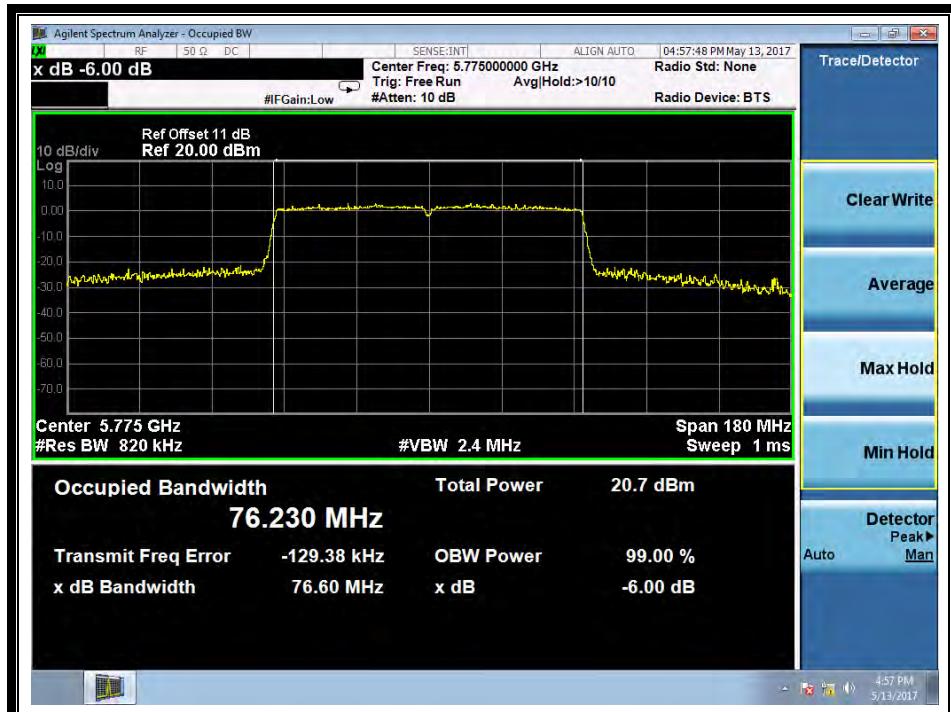
(Channel 122: 5610MHz @ 802.11ac)



(Channel 138: 5690MHz @ 802.11ac)



REPORT No.: SZ17040257W04



(Channel 155: 5775MHz @ 802.11ac)

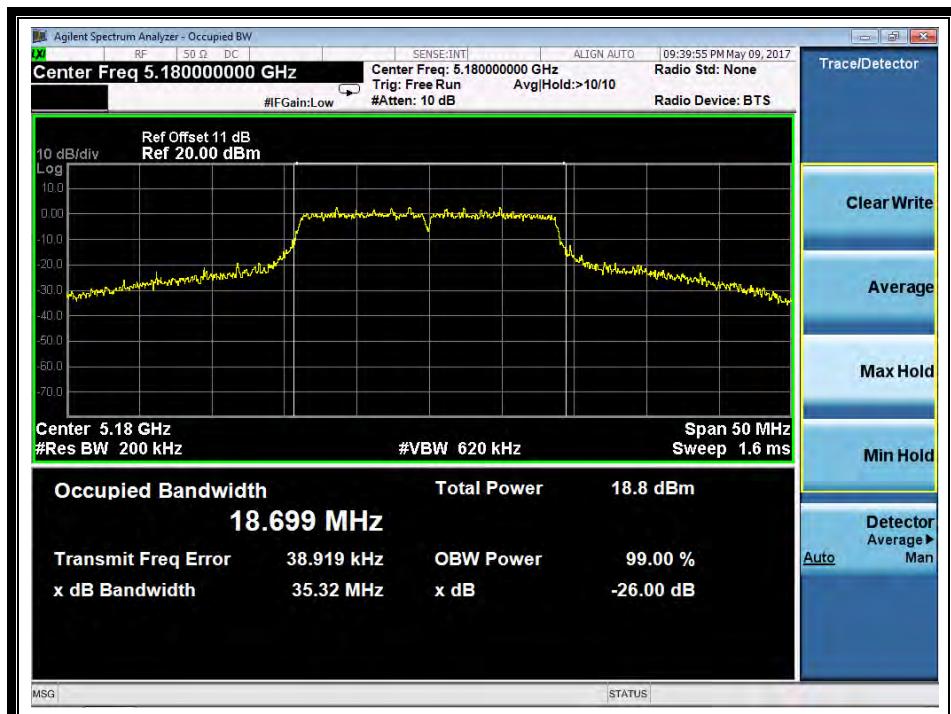
2.2.3.4 802.11n-20MHz Test mode

A. Test Verdict:

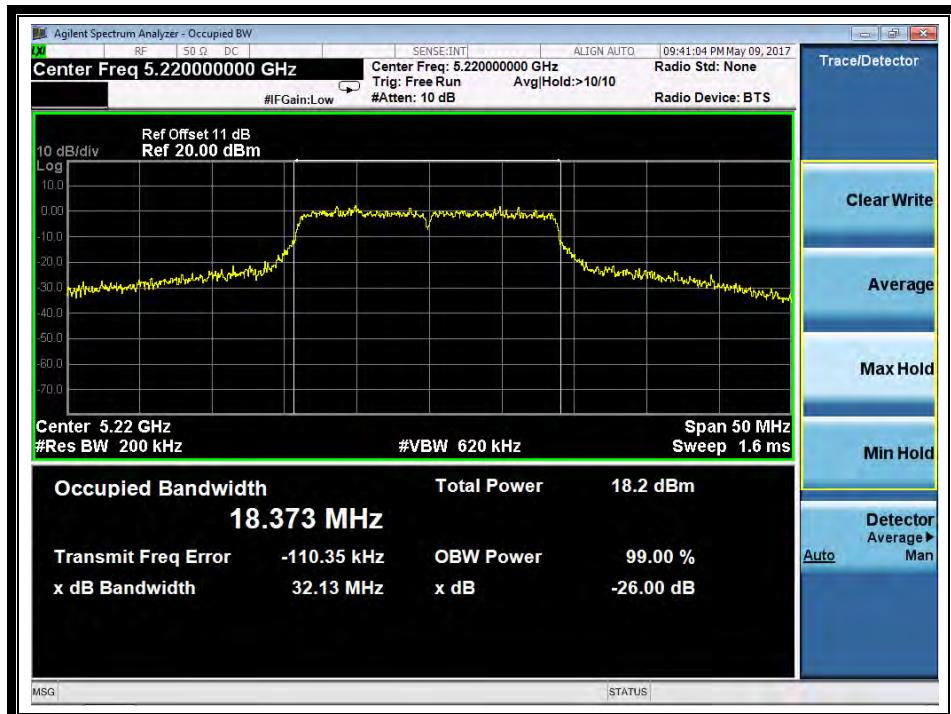
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
36	5180	35.32
44	5220	32.13
48	5240	30.85
52	5260	34.44
60	5300	32.31
64	5320	26.81
100	5500	24.87
120	5600	26.11
140	5700	26.86
Channel	Frequency (MHz)	6dB Bandwidth (MHz)
149	5745	17.65
157	5785	17.63
165	5825	17.64



B. Test Plots



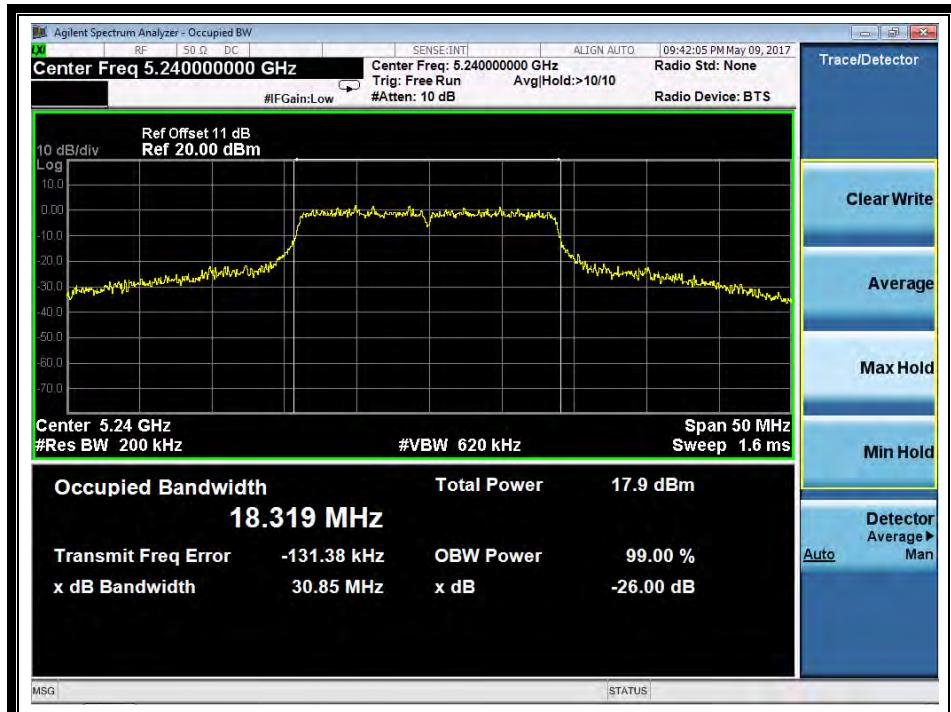
(Channel 36: 5180MHz @ 802.11n-20MHz)



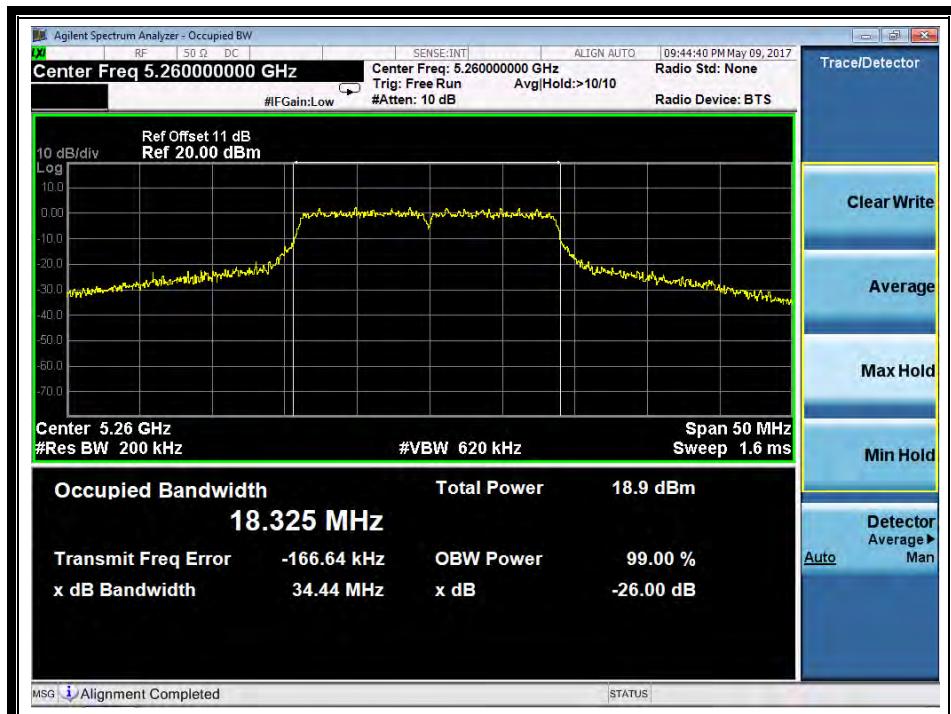
(Channel 44: 5220 MHz @ 802.11n-20MHz)



REPORT No.: SZ17040257W04



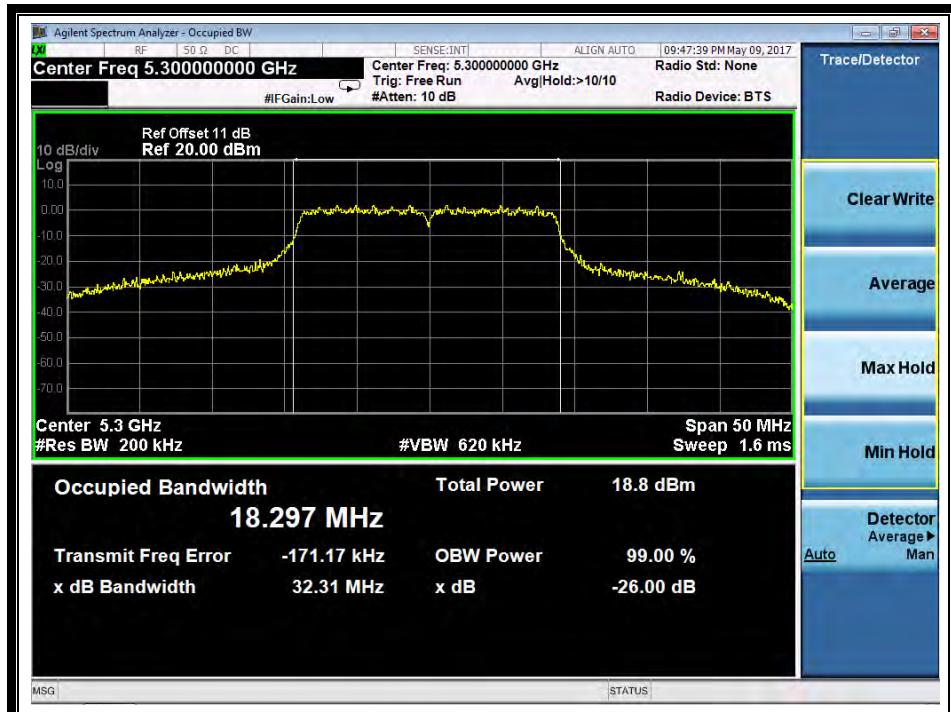
(Channel 48: 5240MHz @ 802.11n-20MHz)



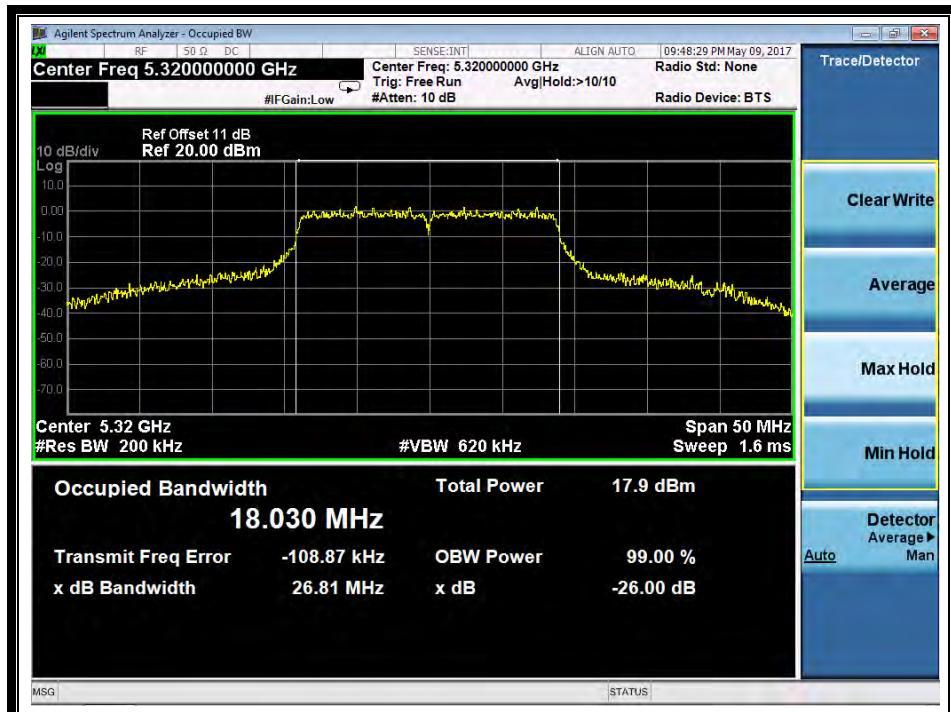
(Channel 52: 5260MHz @ 802.11n-20MHz)



REPORT No.: SZ17040257W04



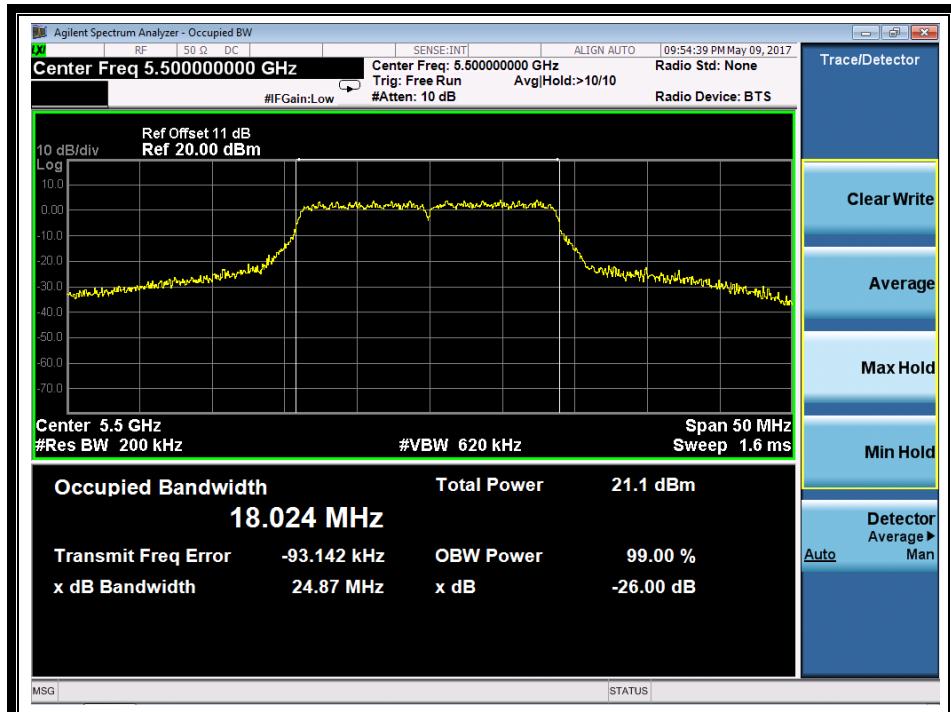
(Channel 60: 5300MHz @ 802.11n-20MHz)



(Channel 64: 5320MHz @ 802.11n-20MHz)



REPORT No.: SZ17040257W04



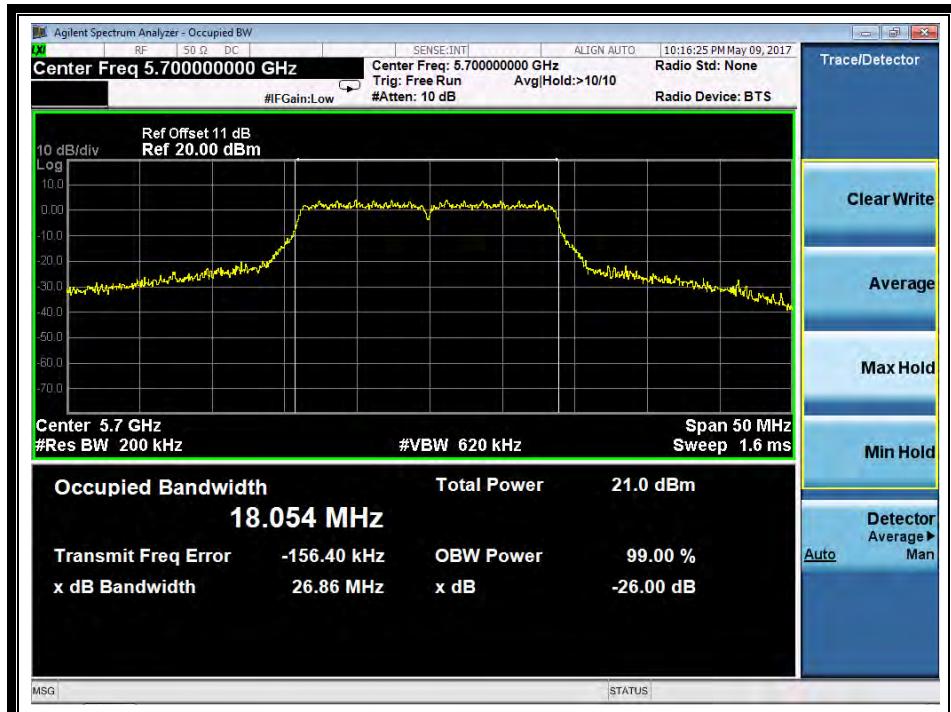
(Channel 100: 5500MHz @ 802.11n-20MHz)



(Channel 120: 5600MHz @ 802.11n-20MHz)



REPORT No.: SZ17040257W04



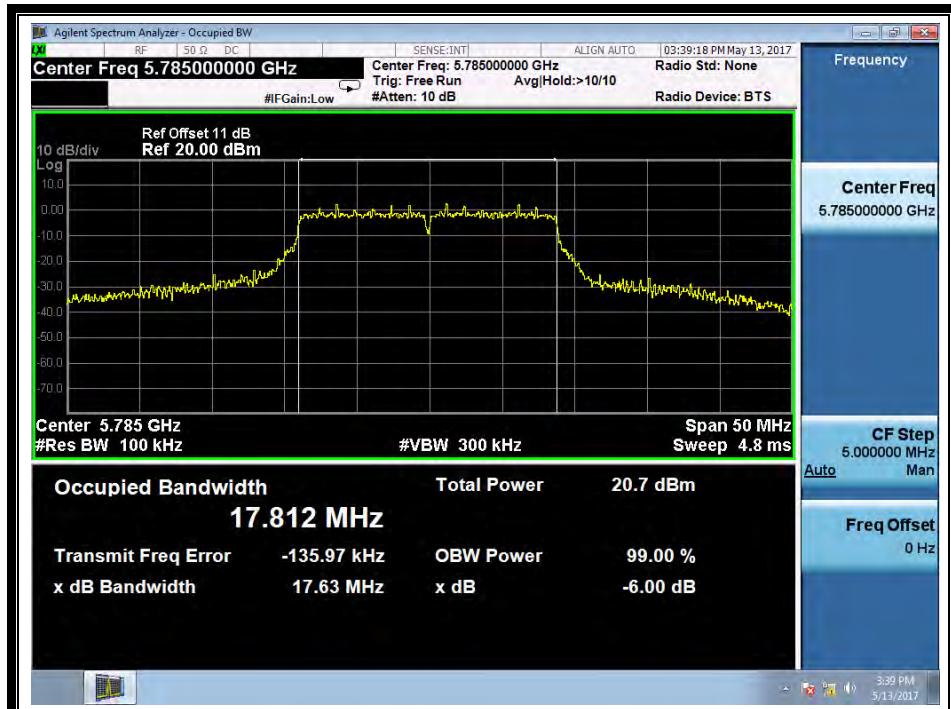
(Channel 140: 5700MHz @ 802.11n-20MHz)



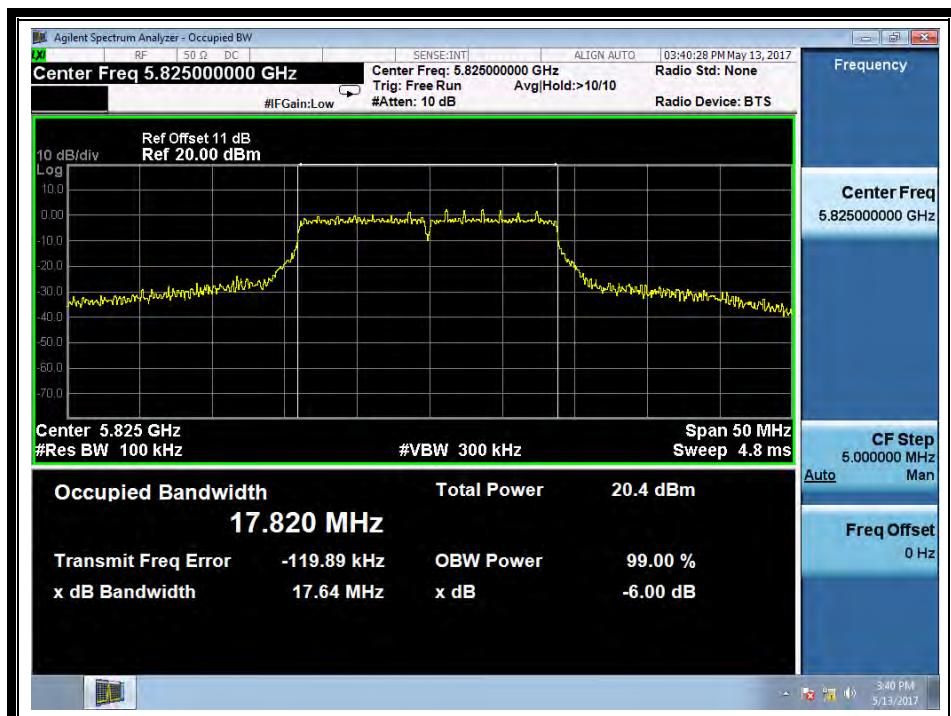
(Channel 149: 5745MHz @ 802.11n-20MHz)



REPORT No.: SZ17040257W04



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



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



2.2.3.5 802.11n-40MHz Test mode

A. Test Verdict:

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
38	5190	70.20
46	5230	66.30
54	5270	69.60
62	5310	72.86
102	5510	47.33
126	5630	50.52
142	5710	45.31
Channel	Frequency (MHz)	6dB Bandwidth (MHz)
151	5755	36.37
159	5795	36.41

B. Test Plots



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



REPORT No.: SZ17040257W04



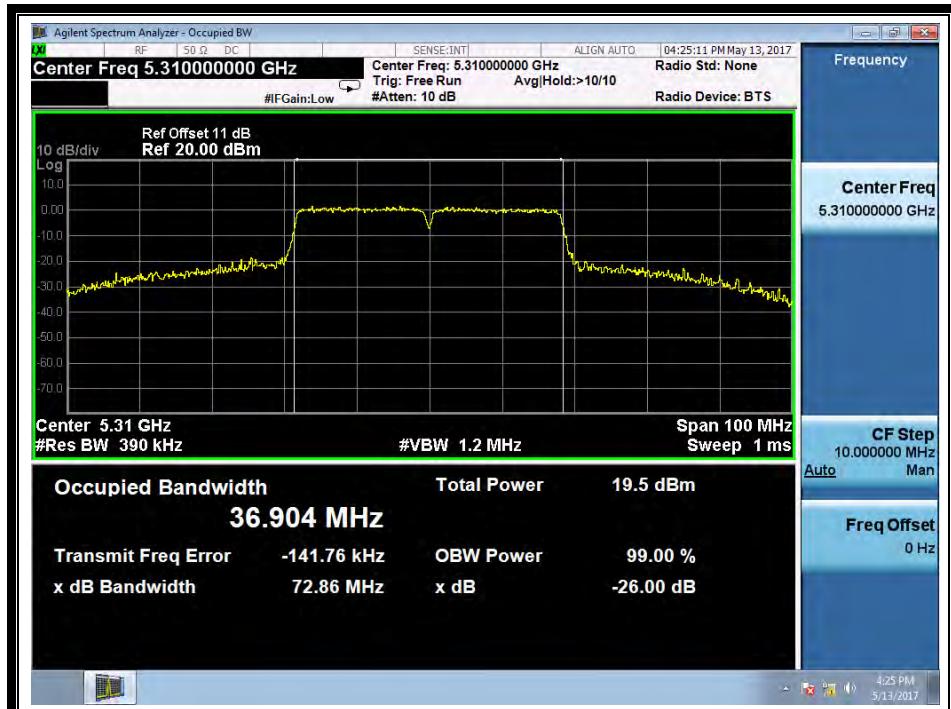
(Channel 46: 5230 MHz @ 802.11n-40MHz)



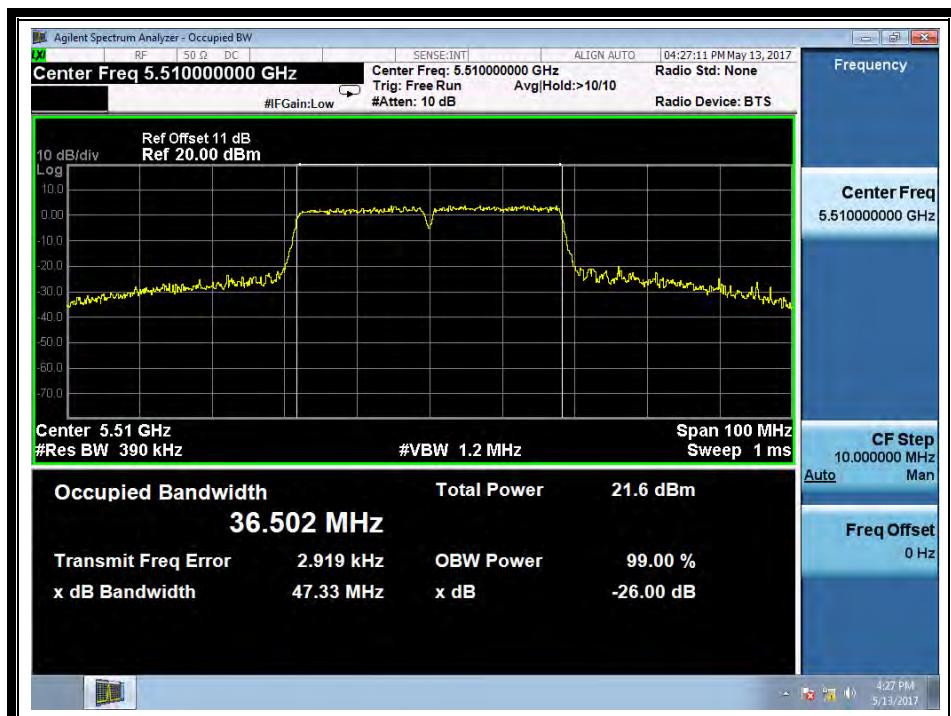
(Channel 54: 5270MHz @802.11n-40MHz)



REPORT No.: SZ17040257W04



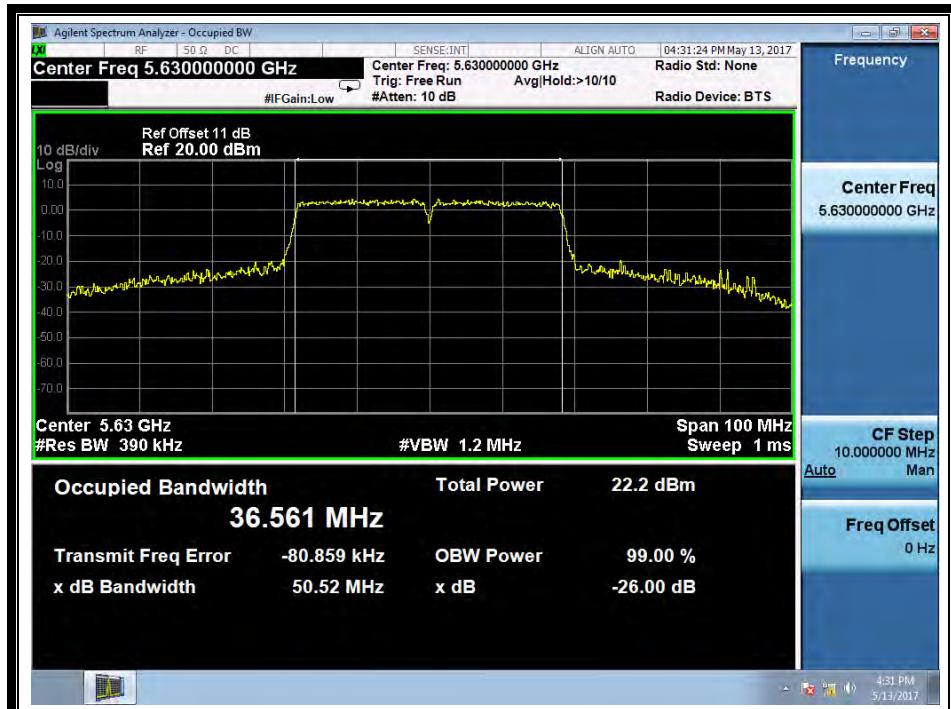
(Channel 62: 5310MHz @ 802.11n-40MHz)



(Channel 102: 5510MHz @802.11n-40MHz)



REPORT No.: SZ17040257W04



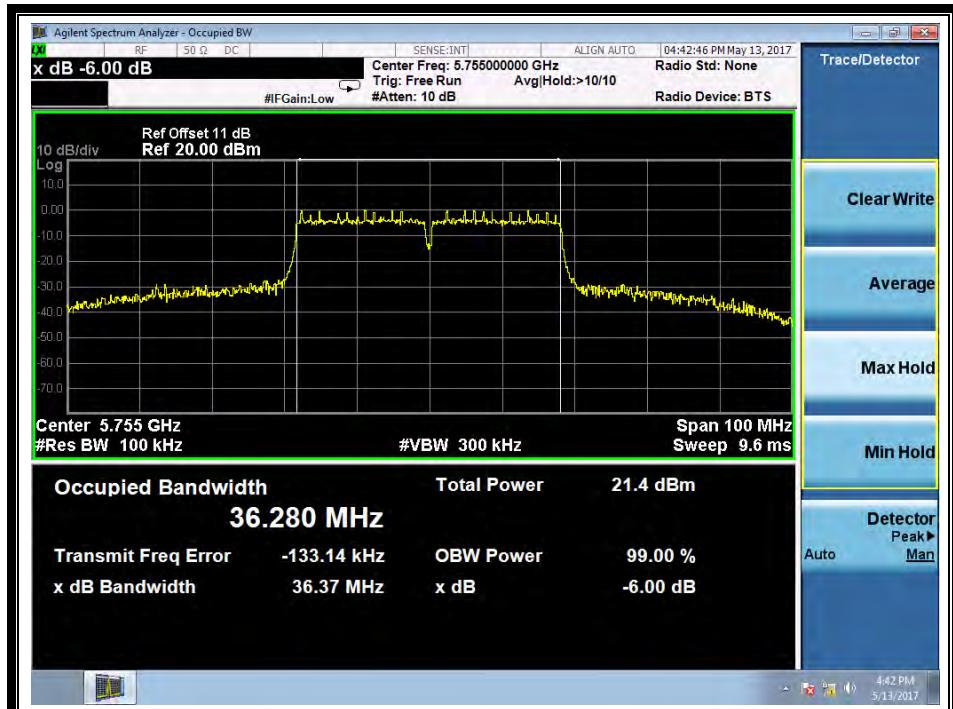
(Channel 126: 5630MHz @ 802.11n-40MHz)



(Channel 142: 5710MHz @ 802.11n-40MHz)



REPORT No.: SZ17040257W04



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



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



2.3 Maximum conducted output power

2.3.1 Requirement

- (1) For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi.
- (2) For the 5.25–5.35 GHz and 5.47–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250mW or $11\text{dBm} + 10\log B$, where B is the 26 dB emission bandwidth in megahertz.
- (3) For the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

According FCC KDB644545 D03 D)1)b)3) requirement:

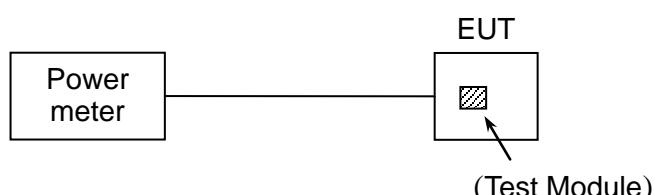
- a) The maximum conducted output power within each band of operation shall comply with the limits for that band.
- b) The limit on maximum conducted output power in each U-NII band is computed based on the portion of the emission bandwidth contained within that band

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 an RF average power meter.

A. Test Setup:



The EUT (Equipment under the test) which is powered by the Battery is coupled to the Power Meter; 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

Channel	Frequency (MHz)	Measured Output Power(dBm)	Limit (dBm)	Verdict
36	5180	16.45	24	PASS
44	5220	16.03		
48	5240	15.97		
52	5260	15.90		
60	5300	15.96		
64	5320	16.17		
100	5500	19.82		
116	5600	20.57		
140	5700	19.87		
149	5745	19.46		
157	5785	19.50	30	
165	5825	18.71		

2.3.3.2 802.11ac-40MHz Test mode

Channel	Frequency (MHz)	Measured Output Power(dBm)	Limit (dBm)	Verdict
38	5190	15.81	24	PASS
46	5230	14.44		
54	5270	14.76		
62	5310	15.25		
102	5510	19.42		
126	5630	18.75		
142	5710	18.23		
151	5755	18.87	30	
159	5795	18.14		

**2.3.3.3 802.11ac-80MHz Test mode**

Channel	Frequency (MHz)	Measured Output Power(dBm)	Limit (dBm)	Verdict
42	5210	14.00	24 U-NII-2C:24 & U-NII-3:30	PASS
58	5290	14.35		
106	5530	17.82		
122	5610	17.77		
138	5690	18.99		
155	5775	16.69		

2.3.3.4 802.11n-20MHz Test mode

Channel	Frequency (MHz)	Measured Output Power(dBm)	Limit (dBm)	Verdict
36	5180	16.18	24	PASS
44	5220	16.02		
48	5240	15.90		
52	5260	15.51		
60	5300	16.06		
64	5320	16.23		
100	5500	19.97		
120	5600	20.60		
140	5700	19.49		
149	5745	19.5		
157	5785	19.26	30	
165	5825	18.92		



REPORT No.: SZ17040257W04

2.3.3.5 802.11n-40MHz Test mode

Channel	Frequency (MHz)	Measured Output Power(dBm)	Limit (dBm)	Verdict
38	5190	15.97	24	PASS
46	5230	15.36		
54	5270	15.20		
62	5310	14.96		
102	5510	19.37		
126	5630	19.32		
142	5710	18.78		
151	5755	18.79		
159	5795	18.13	30	

2.4 Peak Power spectral density

2.4.1 Requirement

- (1) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.
- (2) For the 5.25–5.35 GHz and 5.47–5.725GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.
- (3) For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500KHz band.

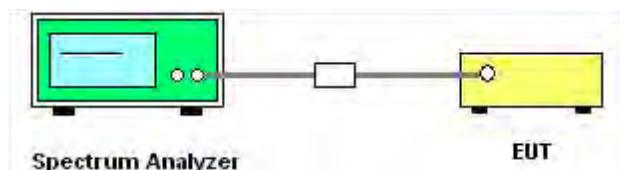
According FCC KDB644545 D03 D)1)b)2) requirement:

Emissions in each band shall comply with the PSD limits applicable to that band under the appropriate rule section.

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

2.4.2 Test Description

A. Test Set:



The EUT which is powered by the Battery, 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

KDB 789033 Section F) Maximum Power Spectral Density (PSD) Method SA-1 was used in order to prove compliance

- 1) Set span to encompass the entire 26-dB emission bandwidth
- 2) Set RBW = 1 MHz. Set VBW \geq 3 MHz.
- 3) Number of points in sweep \geq 2 Span / RBW. Sweep time = auto.
- 4) Detector = RMS (i.e., power averaging)
- 5) Trace average at least 100 traces in power averaging (i.e., RMS) mode
- 6) Record the max value



2.4.3 Test Result

2.4.3.1 802.11ac-20MHz Test mode

A. Test Verdict:

Channel	Frequency (MHz)	Measured PPSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
36	5180	4.03	11	PASS
44	5220	4.97		
48	5240	6.06		
52	5260	5.97		
60	5300	7.10		
64	5320	7.09		
100	5500	6.72		
120	5600	5.93		
140	5700	5.72		
Channel	Frequency (MHz)	Measured PPSD (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
149	5745	3.52	30	PASS
157	5785	3.18		
165	5825	2.41		

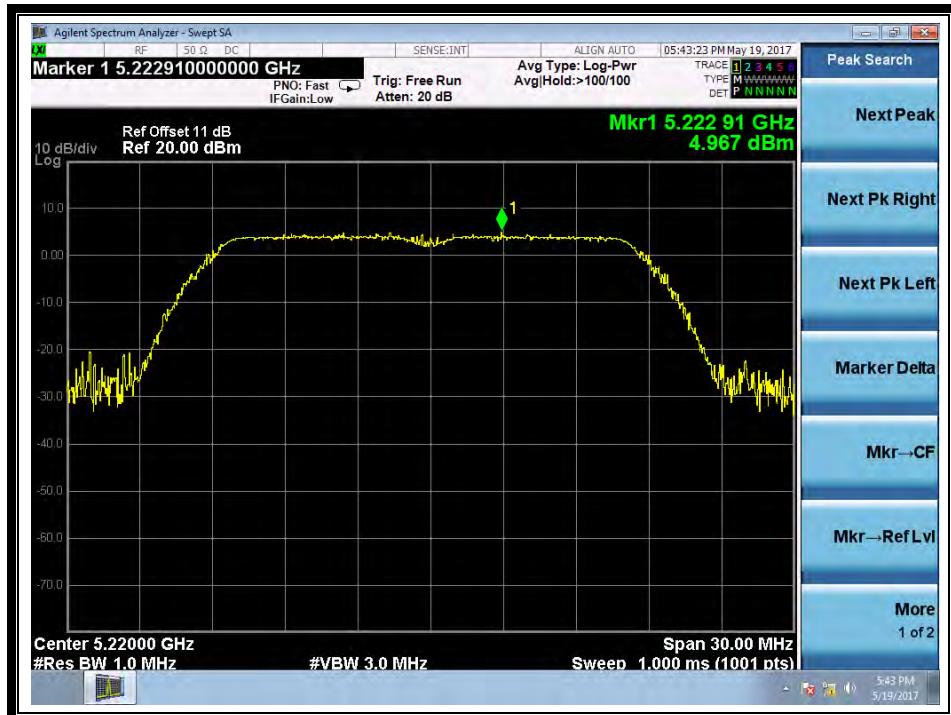
B. Test Plots





REPORT No.: SZ17040257W04

(Channel 36: 5180MHz @ 802.11ac)



(Channel 44: 5220 MHz @ 802.11ac)



(Channel 48: 5240MHz @ 802.11ac)

MORLAB GROUP

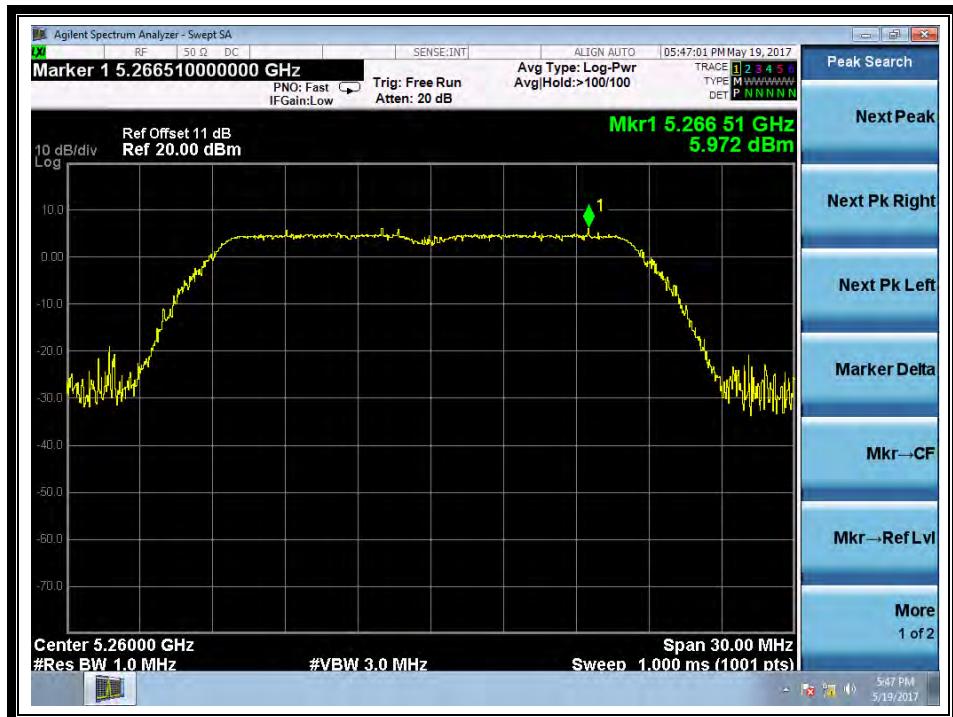
FL1-3, Building A, FeiYang Science Park, No.8 LongChang Road,
Block67, BaoAn District, ShenZhen , GuangDong Province, P. R. China

Tel: 86-755-36698555
Http://www.morlab.com

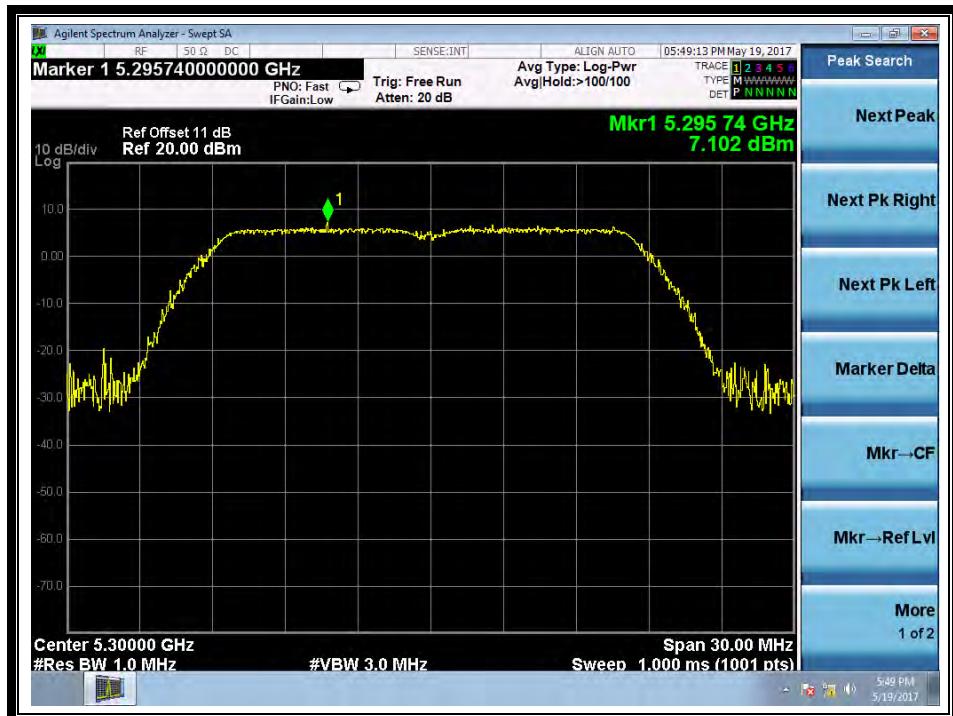
Fax: 86-755-36698525
E-mail: service@morlab.cn



REPORT No.: SZ17040257W04



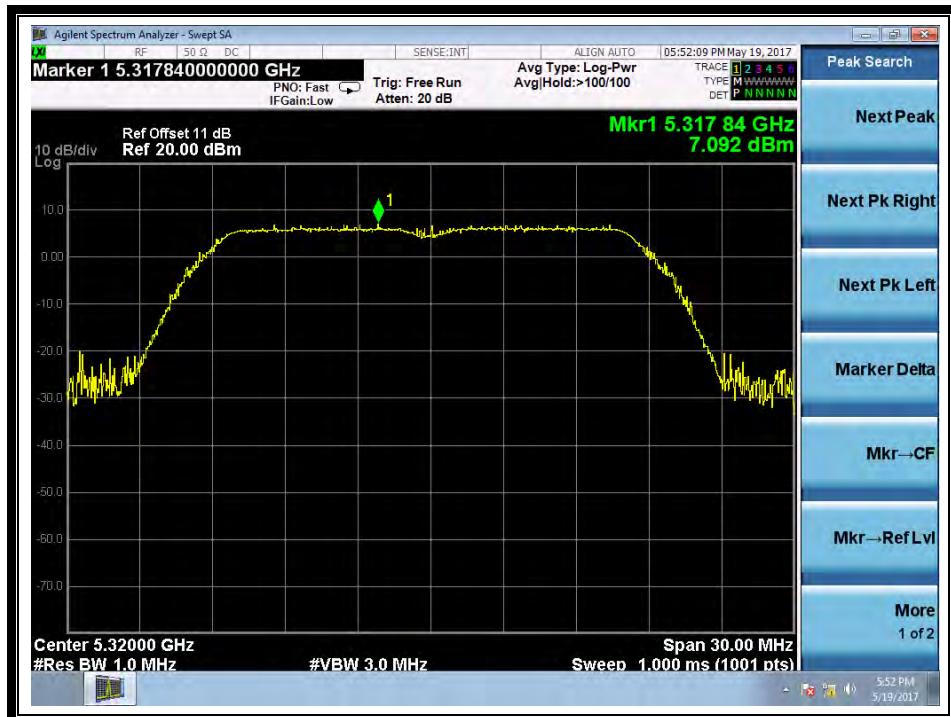
(Channel 52: 5260MHz @ 802.11ac)



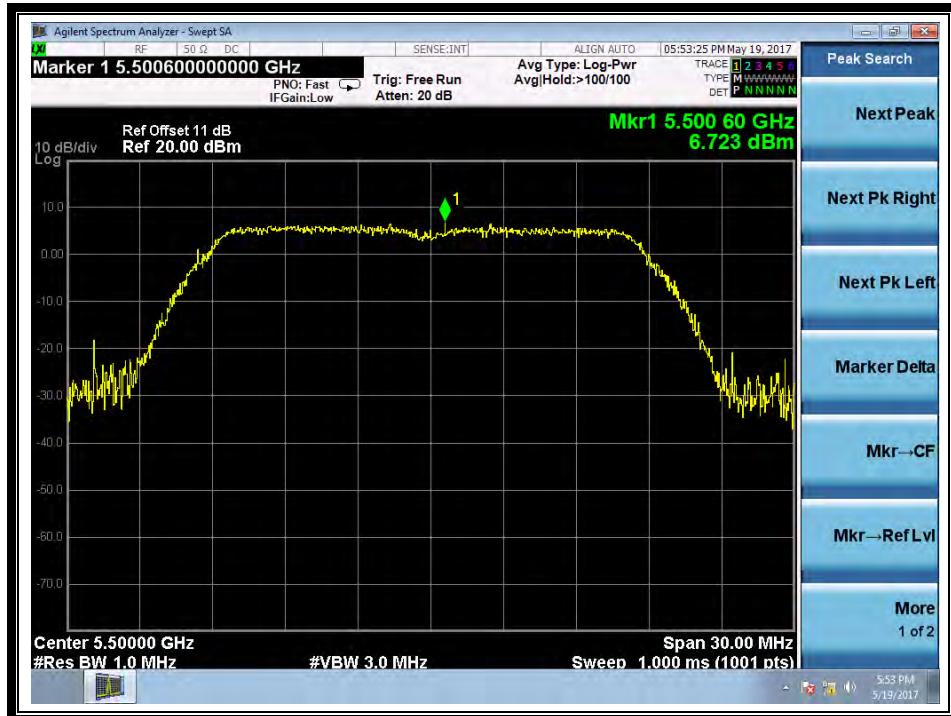
(Channel 60: 5300MHz @ 802.11ac)



REPORT No.: SZ17040257W04



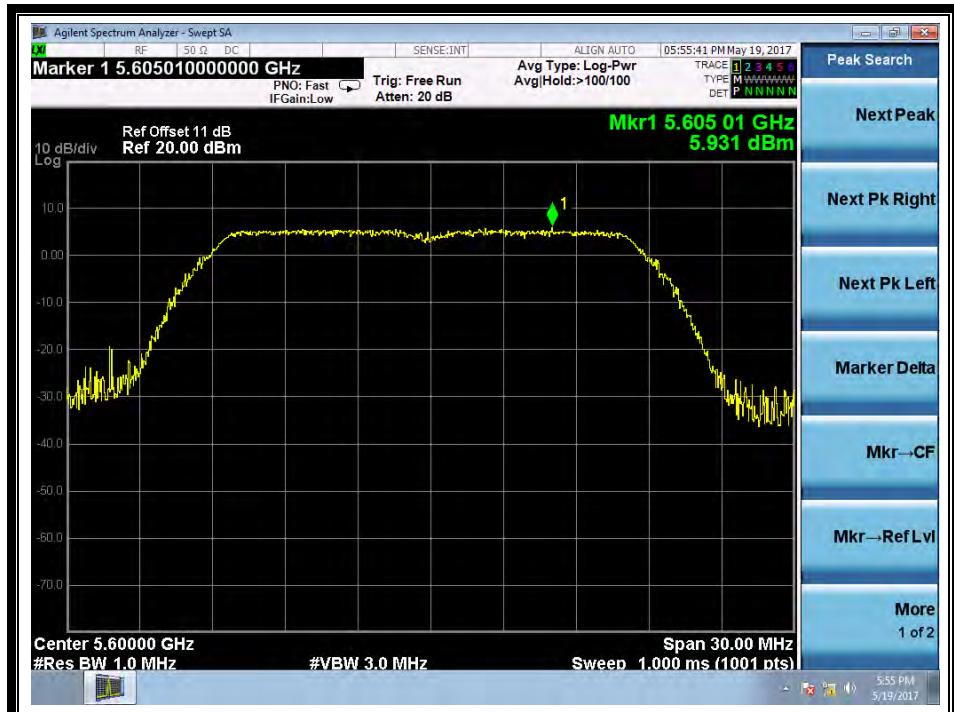
(Channel 64: 5320MHz @ 802.11ac)



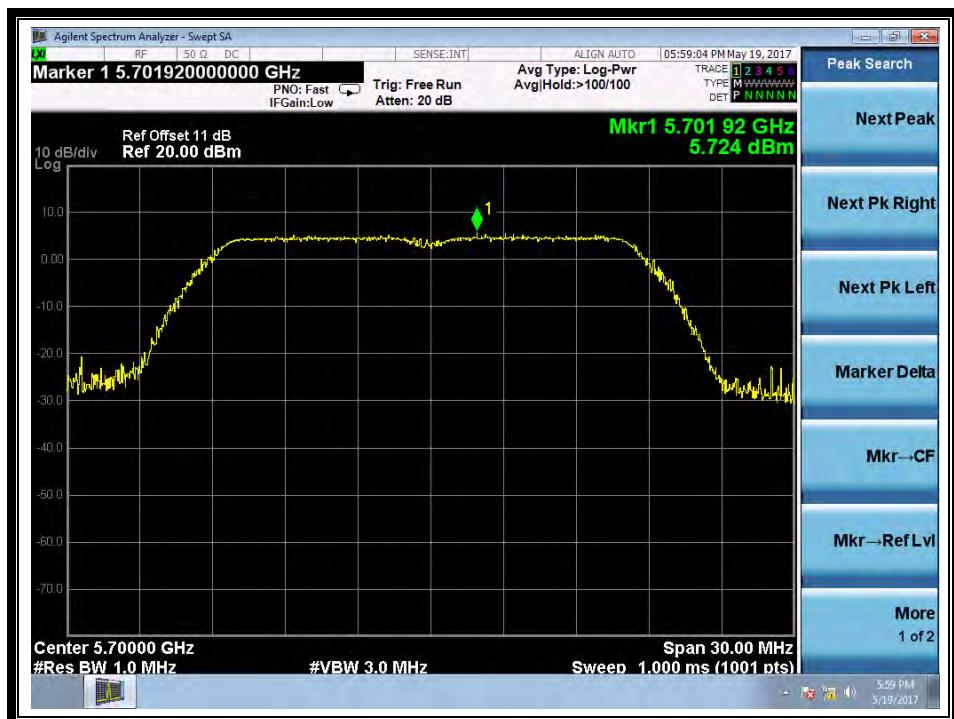
(Channel 100: 5500MHz @ 802.11ac)



REPORT No.: SZ17040257W04



(Channel 120: 5600MHz @ 802.11ac)



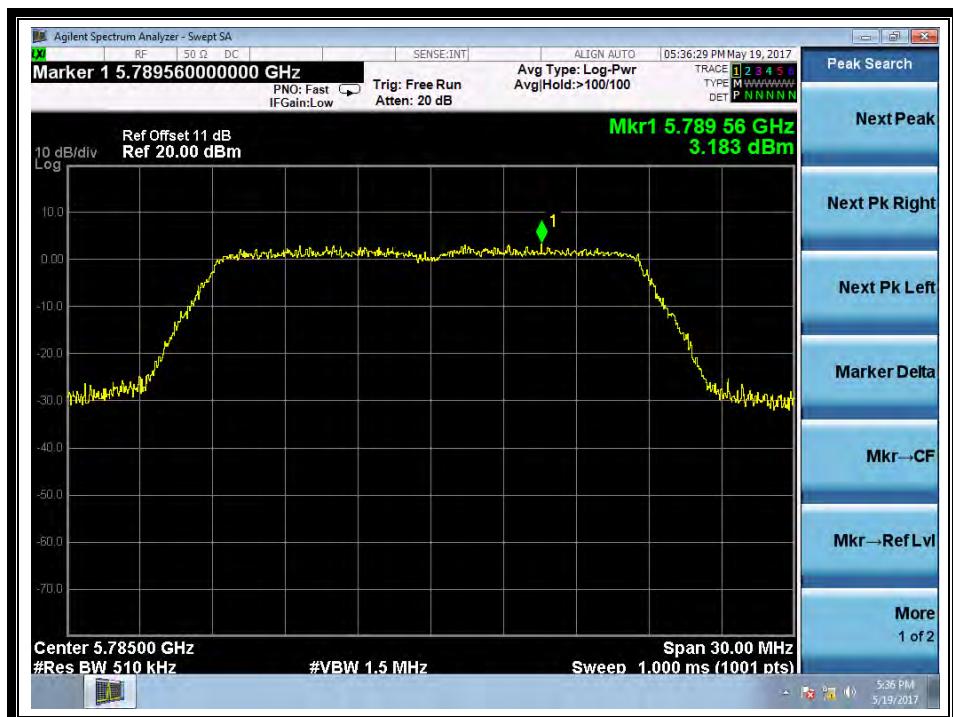
(Channel 140: 5700MHz @ 802.11ac)



REPORT No.: SZ17040257W04



(Channel 149: 5745MHz @ 802.11ac)



(Channel 157: 5785MHz @ 802.11ac)



(Channel 165: 5825MHz @ 802.11ac)

2.4.3.2 802.11ac-40MHz Test mode

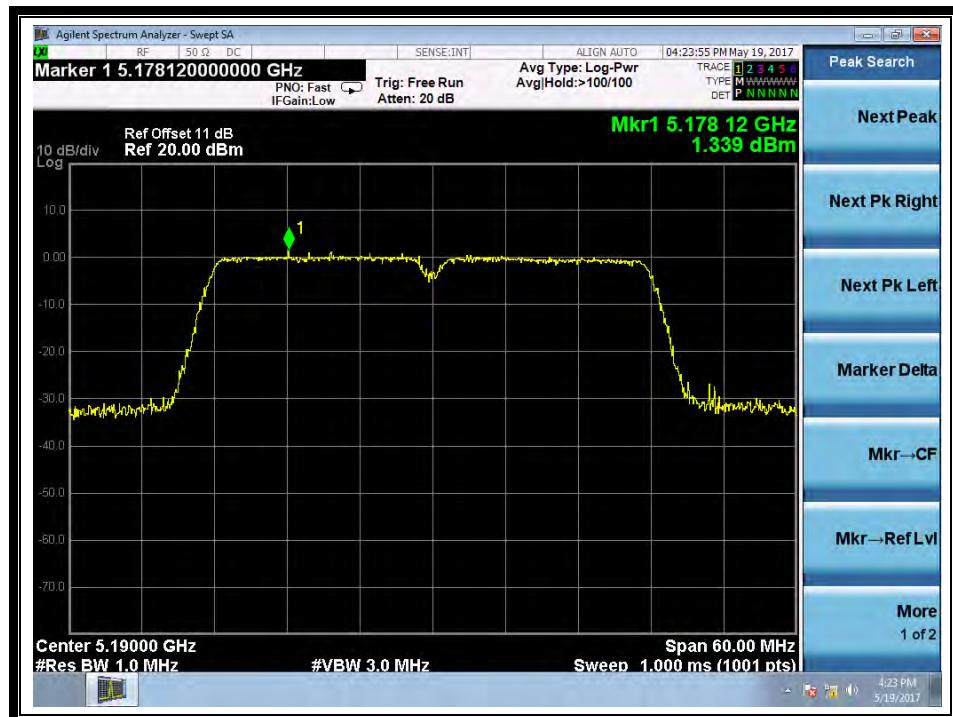
A. Test Verdict:

Channel	Frequency (MHz)	Measured PPSD (dBm/MHz)	Limit (dBm/MHz))	Verdict
38	5190	1.34	11	PASS
46	5230	1.65		
54	5270	2.65		
62	5310	3.64		
102	5510	2.83		
126	5630	2.96		
142	5710	2.97	U-NII-2C:11dBm/MHz U-NII-3:30dBm/500KHz	PASS
Channel	Frequency (MHz)	Measured PPSD (dBm/500KHz)	Limit (dBm/500KHz)	
151	5755	0.05	30	
159	5795	-0.15	PASS	



REPORT No.: SZ17040257W04

B. Test Plots



(Channel 38: 5190MHz @ 802.11ac)



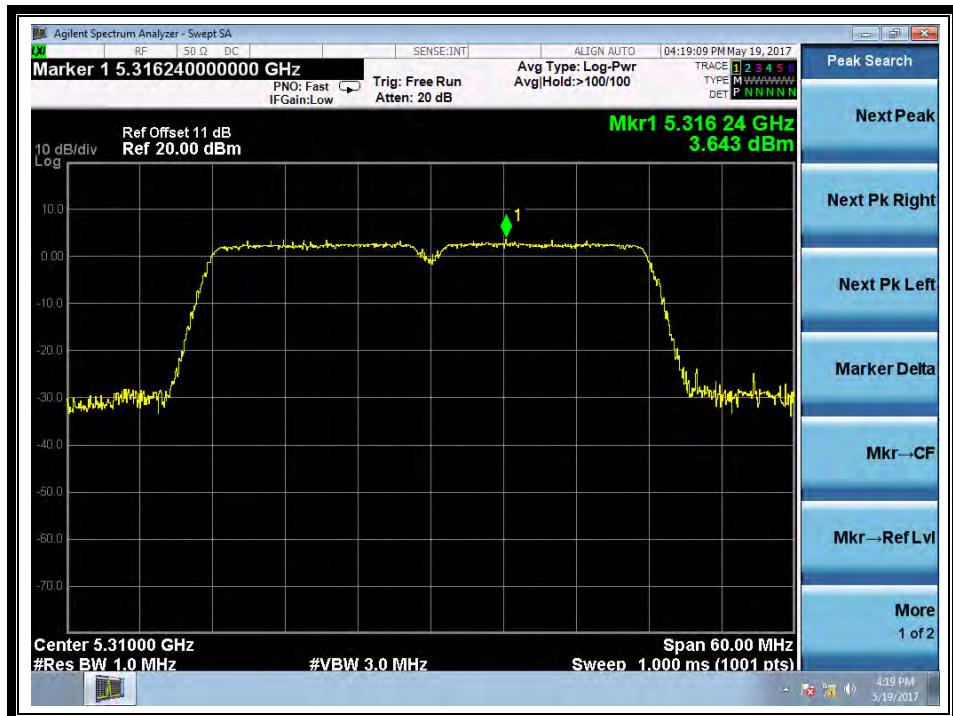
(Channel 46: 5230 MHz @ 802.11ac)



REPORT No.: SZ17040257W04



(Channel 54: 5270MHz @ 802.11ac)



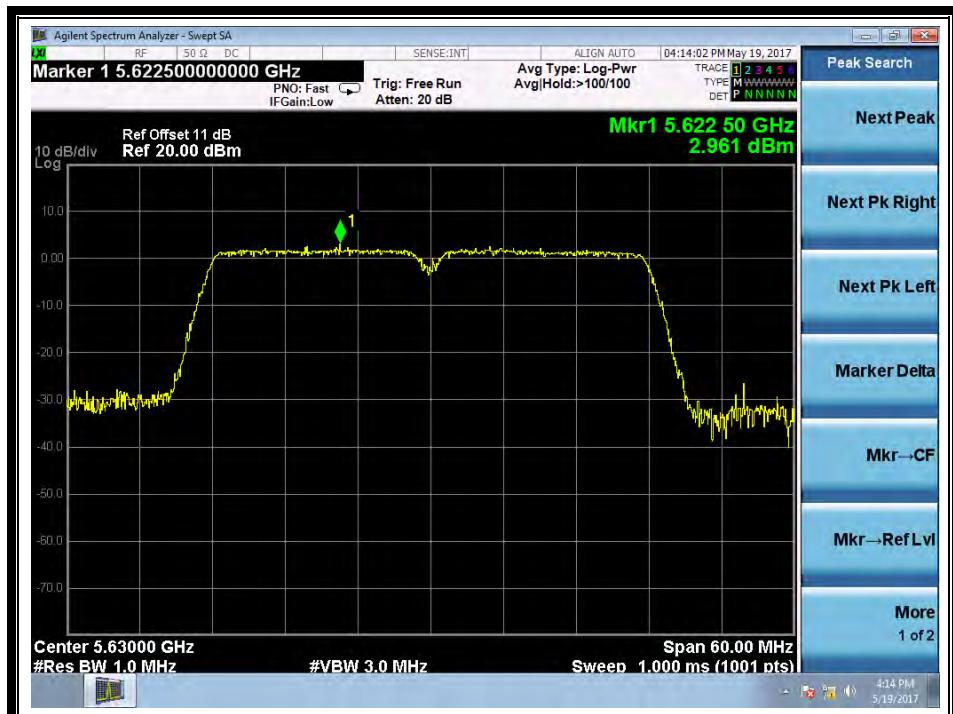
(Channel 62: 5310MHz @ 802.11ac)



REPORT No.: SZ17040257W04



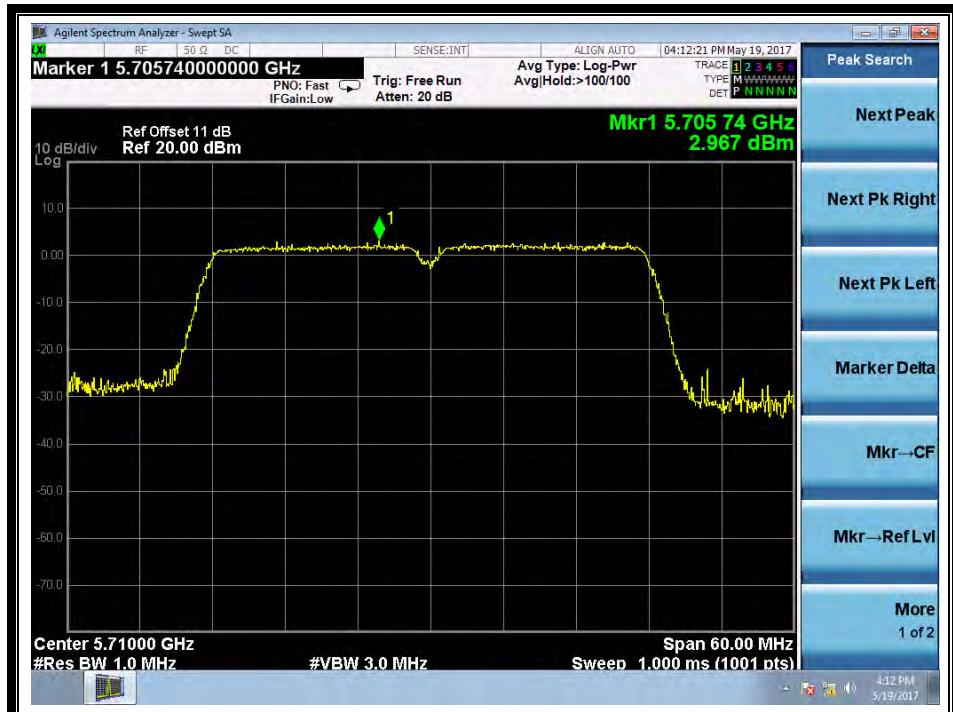
(Channel 102: 5510MHz @ 802.11ac)



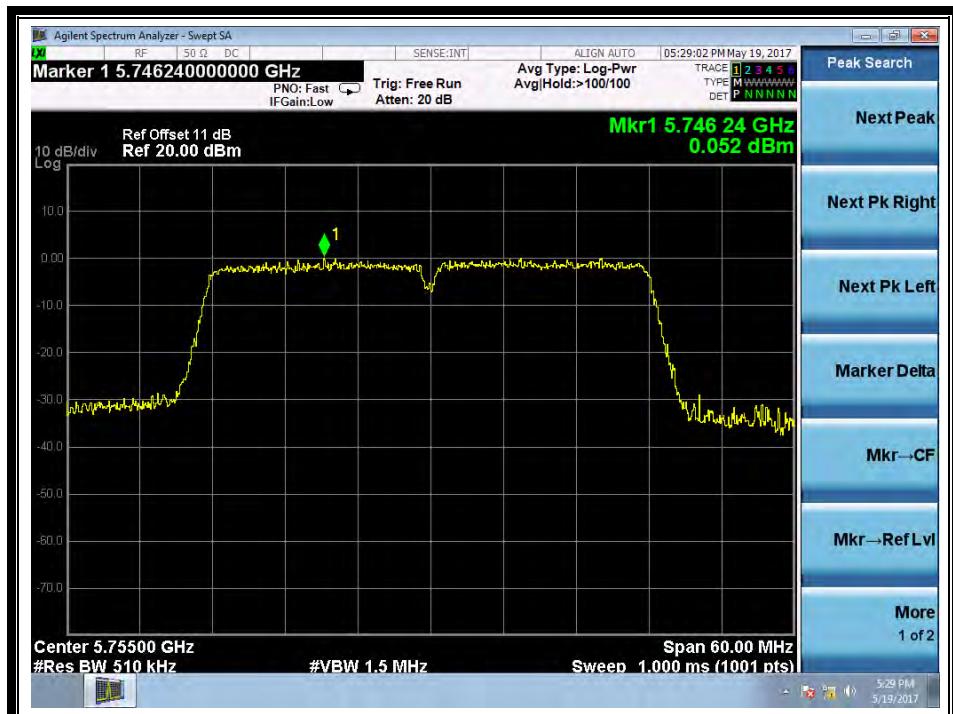
(Channel 126: 5630MHz @ 802.11ac)



REPORT No.: SZ17040257W04



(Channel 142: 5710MHz @ 802.11ac)



(Channel 151: 5755MHz @ 802.11ac)



REPORT No.: SZ17040257W04



(Channel 159: 5795MHz @ 802.11ac)

2.4.3.3 802.11ac-80MHz Test mode

A. Test Verdict:

Channel	Frequency (MHz)	Measured PPSD (dBm)	Limit (dBm/MHz)	Verdict
42	5210	-1.27	11	PASS
58	5290	-2.12		
106	5530	1.60		
122	5610	1.57		
138	5690	1.54	U-NII-2C:11dBm/MHz U-NII-3:30dBm/500KHz	
Channel	Frequency (MHz)	Measured PPSD (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
155	5775	-2.85	30	PASS



B. Test Plots



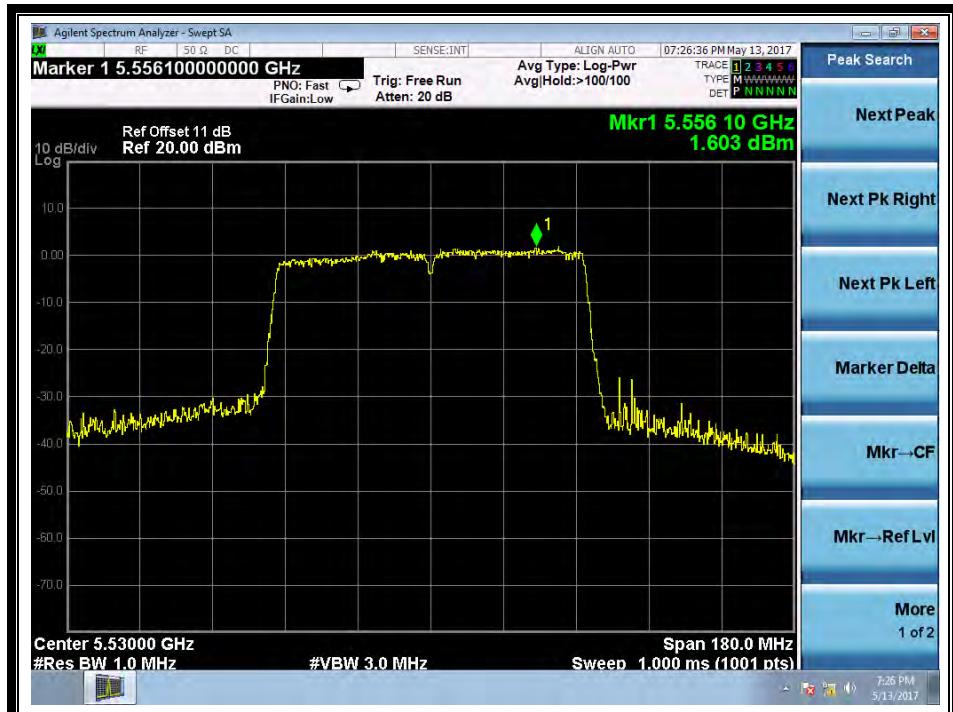
(Channel 42: 5210MHz @ 802.11ac)



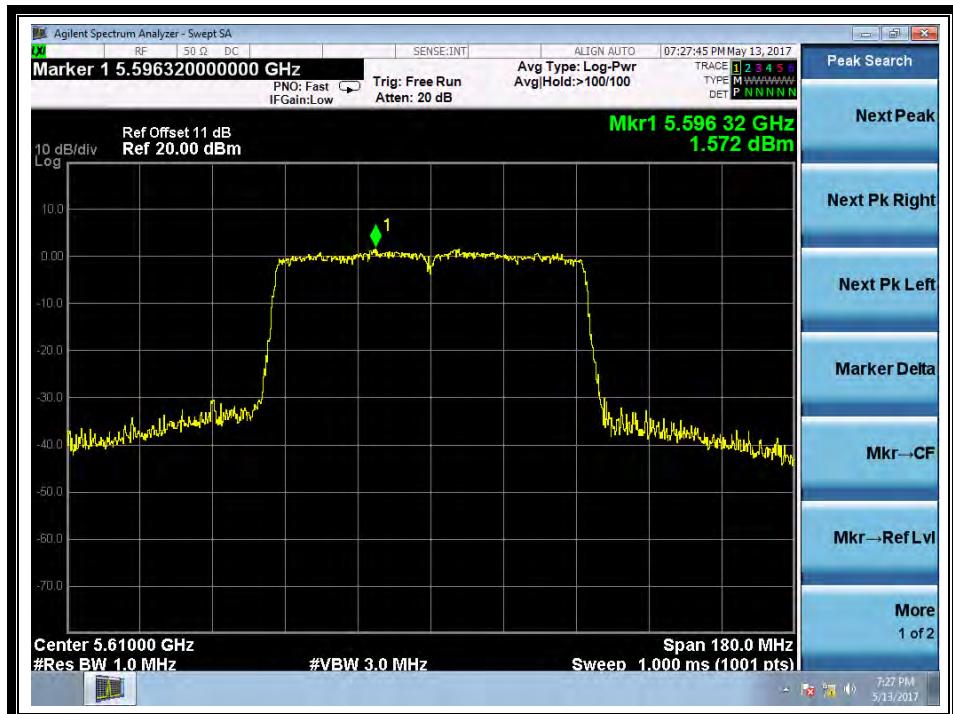
(Channel 58: 5290MHz @ 802.11ac)



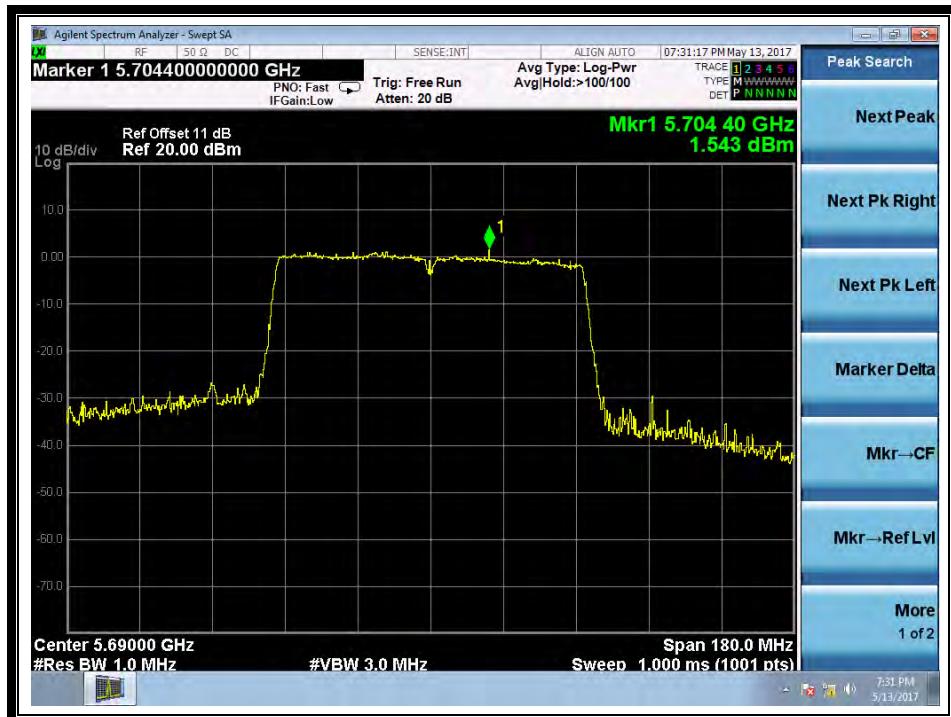
REPORT No.: SZ17040257W04



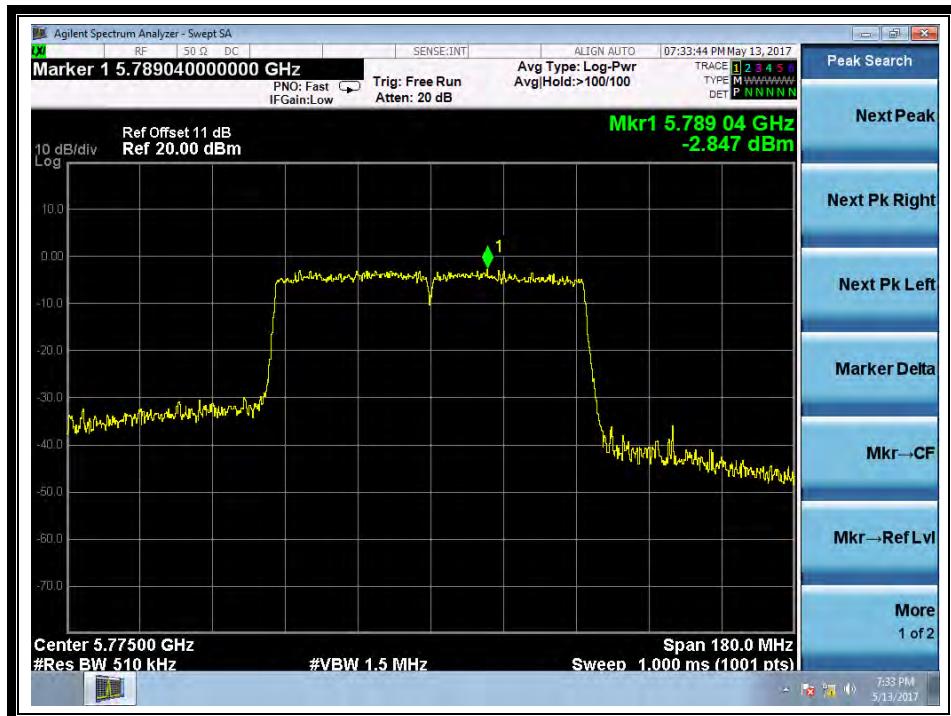
(Channel 106: 5530MHz @ 802.11ac)



(Channel 122: 5610MHz @ 802.11ac)



(Channel 138: 5690MHz @ 802.11ac)



(Channel 155: 5775MHz @ 802.11ac)



2.4.3.4 802.11n-20MHz Test mode

A. Test Verdict:

Channel	Frequency (MHz)	Measured PPSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
36	5180	5.84	11	PASS
44	5220	4.36		
48	5240	4.04		
52	5260	4.21		
60	5300	4.33		
64	5320	4.49		
100	5500	7.51		
120	5600	8.88		
140	5700	7.43		
Channel	Frequency (MHz)	Measured PPSD (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
149	5745	4.20	30	PASS
157	5785	5.01		
165	5825	3.27		

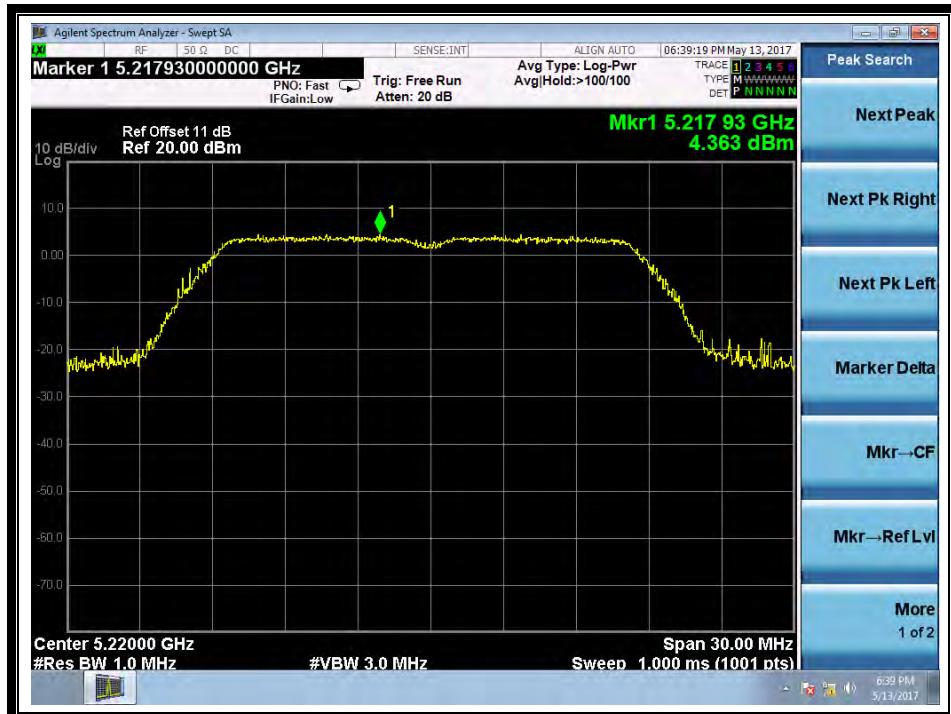
B. Test Plots



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



REPORT No.: SZ17040257W04



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



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



REPORT No.: SZ17040257W04



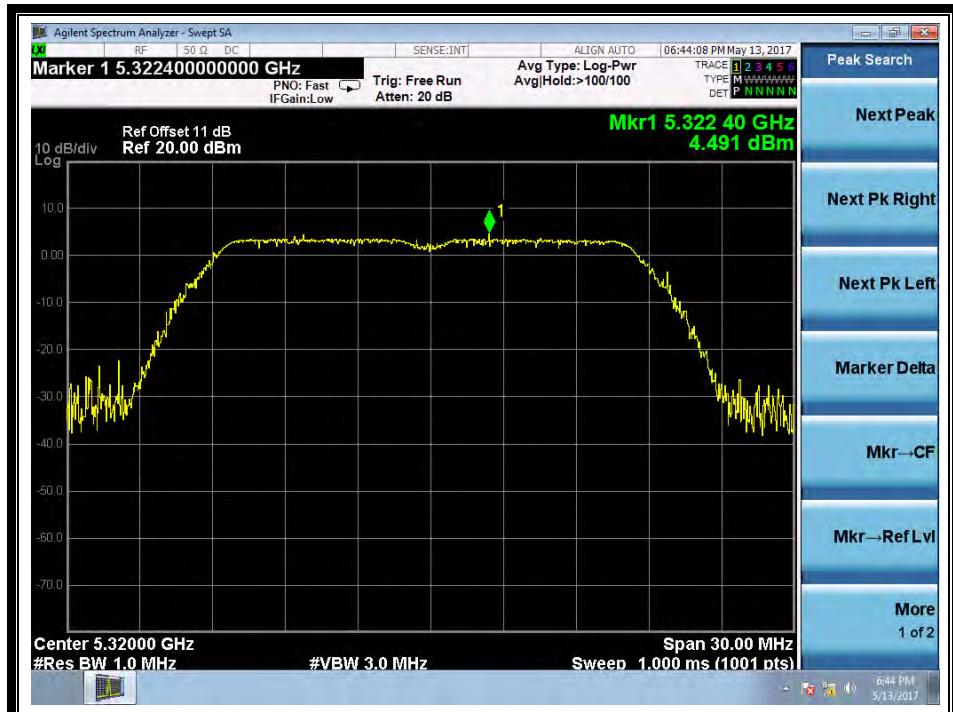
(Channel 52: 5260MHz @ 802.11n-20MHz)



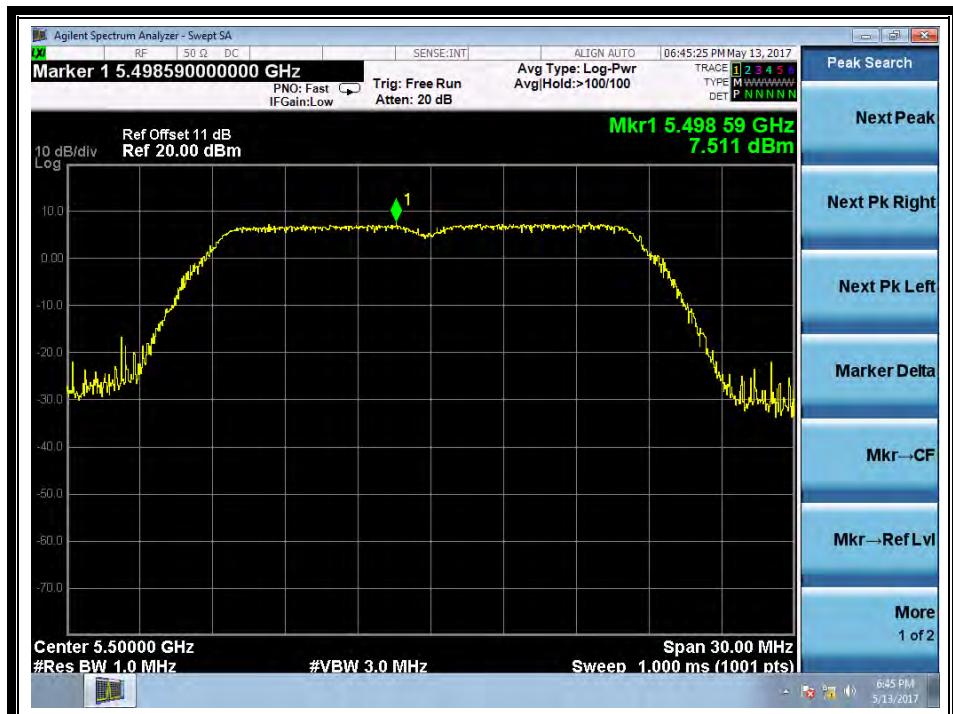
(Channel 60: 5300MHz @ 802.11n-20MHz)



REPORT No.: SZ17040257W04



(Channel 64: 5320MHz @ 802.11n-20MHz)



(Channel 100: 5500MHz @ 802.11n-20MHz)