REPORT No. : XM19070036W06

TEST REPORT

MANUFACTURER	:	Hot Pepper, Inc.
PRODUCT NAME	:	4G Feature Phone
MODEL NAME	:	HPP-LF2
BRAND NAME	:	Hot Pepper
FCC ID	:	2APD4-A90L
STANDARD(S)	:	47 CFR Part 15 Subpart E
RECEIPT DATE	:	2019-08-21
TEST DATE	:	2019-08-21 to 2019-09-18
ISSUE DATE	:	2020-01-09

Edited by : Lai Huihuang

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Review by:

Elvis Wang(Auditor)

Approved by:

Anne Liu (Supervisor)

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DIRECTORY

Change History		
Version	Date	Reason for change
1.0	2020-01-09	First edition

1. Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	Hot Pepper, Inc.
Applicant Address:	5151 California Ave., Suite 100, Irvine 92617, USA
Manufacturer:	Hot Pepper, Inc.
Manufacturer Address:	5151 California Ave., Suite 100, Irvine 92617, USA

1.2. Equipment Under Test (EUT) Description

Product Name:	4G Feature Phone	
Serial No:	(N/A, marked #1 by test site)	
Hardware Version:	A90L_MAINBOARD_P1	
Software Version:	HPP-LF2-V1.0.3-190809	
Modulation Type:	OFDM	
Modulation Mode:	802.11a, 11n(HT20),11n(HT40),802.11ac(HT20), 802.11ac(HT40)	
Operating Frequency Range:	5.180 GHz- 5.240 GHz; 5.260 GHz -5.320 GHz ; 5.745GHz- 5.825GHz	
Channel Number:	Refer to 1.3	
Antenna Type:	PIFA Antenna	
Antenna Gain:	5.1G:-0.8 dBi,5.2G:-0.8dBi;5.8G:-0.9dBi	
Accessory Information:	Battery	
	Manufacturer:	Shenzhen HUATIANTONG TECHNOLOGY CO.LTD
	Brand Name:	Hot Pepper
	Model No.:	HPP-LF2
	Serial No.:	(N/A, marked #1 by test site)
	Capacity:	1700mAh
	Rated Voltage:	3.80V
	Charge Limit:	4.35V
	AC Adapter	
	Manufacturer:	Shenzhen Tianyin Electronics Co.,Ltd.
	Brand Name:	Hot Pepper

	Model No.:	TPA-46B050100UU
	Serial No.:	(N/A, marked #1 by test site)
	Rated Input:	100-240V ~ 50/60Hz 0.2A
	Rated Output:	5V⎓1.0A

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: WIFI hotspot does not support U-NII band.

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.

1.3. The channel number and frequency of EUT

Frequency Range: 5180-5240MHz				
Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
20MHz	**36**	**5180**	**40**	**5200**
	44	**5220**	**48**	**5240**
40MHz	**38**	**5190**	**46**	**5230**
Frequency Range: 5260-5320MHz				
Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
20MHz	**52**	**5260**	**56**	**5280**
	60	**5300**	**64**	**5320**
40MHz	**54**	**5270**	**62**	**5310**
Frequency Range: 5745-5805MHz				
Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
20MHz	**149**	**5745**	153	5765
	157	**5785**	161	5805
	165	**5825**	/	/
40MHz	**151**	**5755**	**159**	**5795**

Note 1: The black bold channels were selected for test.

1.4. Test Standards and Results

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

No	Identity	Document Title
1	47 CFR Part 15	Radio Frequency Devices

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

No.	Section	Description	Test Date	Test Engineer	Result
1	15.203	Antenna Requirement	N/A	N/A	PASS
2	15.407(a) (e)	Emission Bandwidth	Oct 16, 2019 Oct 18, 2019	Lai Huihuang	PASS
3	15.407(a)	Maximum conducted output Power	Oct 18, 2019	Lai Huihuang	PASS
4	15.407(a)	Peak Power spectral density	Oct 16, 2019 Oct 18, 2019	Lai Huihuang	PASS
5	15.407(b)	Restricted Frequency Bands	Sep 08, 2019 Sep 09, 2019	Yaming Luo	PASS
6	15.407(g)	Frequency Stability	Oct 18, 2019	Lai Huihuang	PASS
7	15.207	Conducted Emission	Sep 09, 2019	Yaming Luo	PASS
8	15.407(b)	Radiated Emission	Sep 08, 2019 Sep 09, 2019	Yaming Luo	PASS
9	15.407(c)	Automatically discontinue transmission requirement	N/A	N/A	PASS
Note: The tests of Conducted Emission and Radiated Emission were performed according to the method of measurements prescribed in ANSI C63.10 2013 and KDB789033 D02 v02r01.					

1.5. Environmental 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.

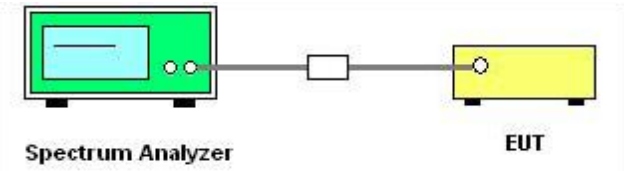
2.2. Emission Bandwidth

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 Setup:



The EUT 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

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

b) Set the VBW > RBW.

c) Detector = Peak.

d) Trace mode = max hold.

e) 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.

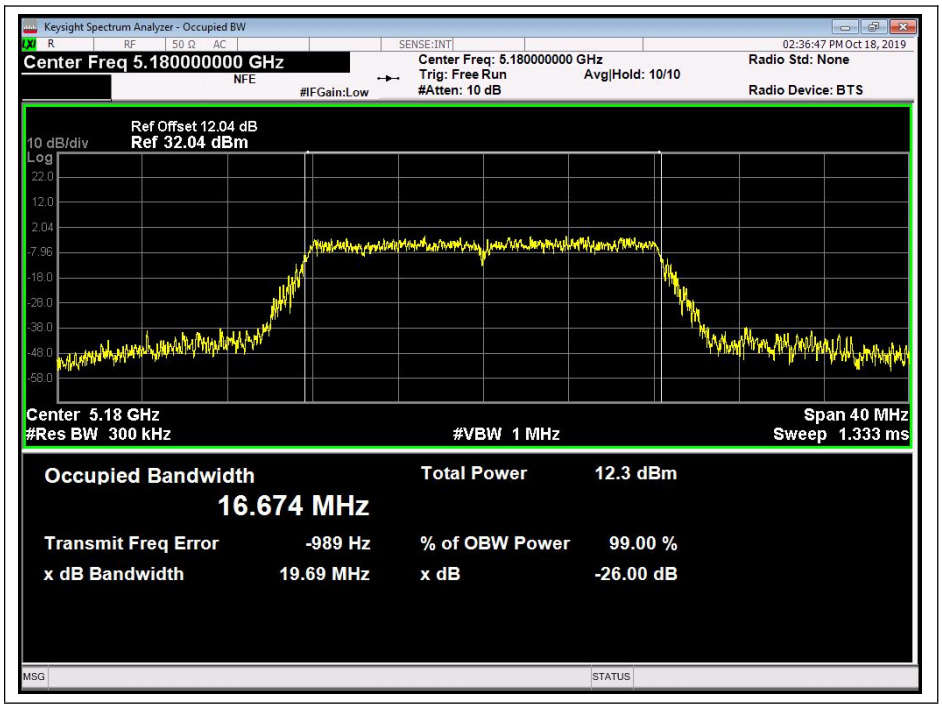
2.2.3. Test Result

802.11a Test mode

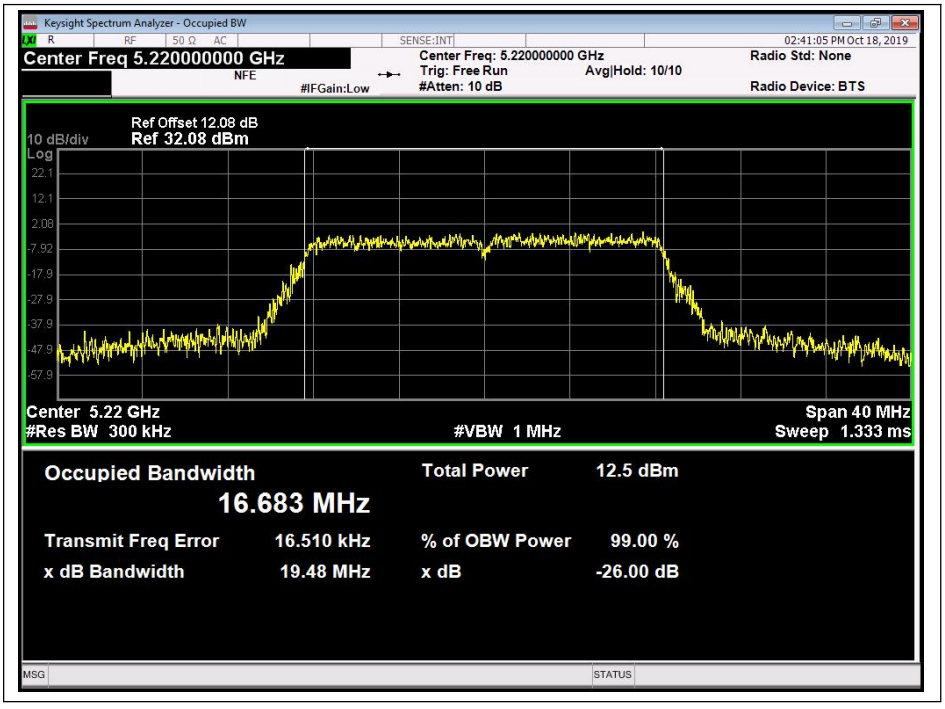
A. Test Verdict:

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
36	5180	19.69
44	5220	19.48
48	5240	19.46
52	5260	19.53
60	5300	19.41
64	5320	19.36
Channel	**Frequency (MHz)**	**6dB Bandwidth (MHz)**
149	5745	15.15
157	5785	16.35
165	5825	16.35

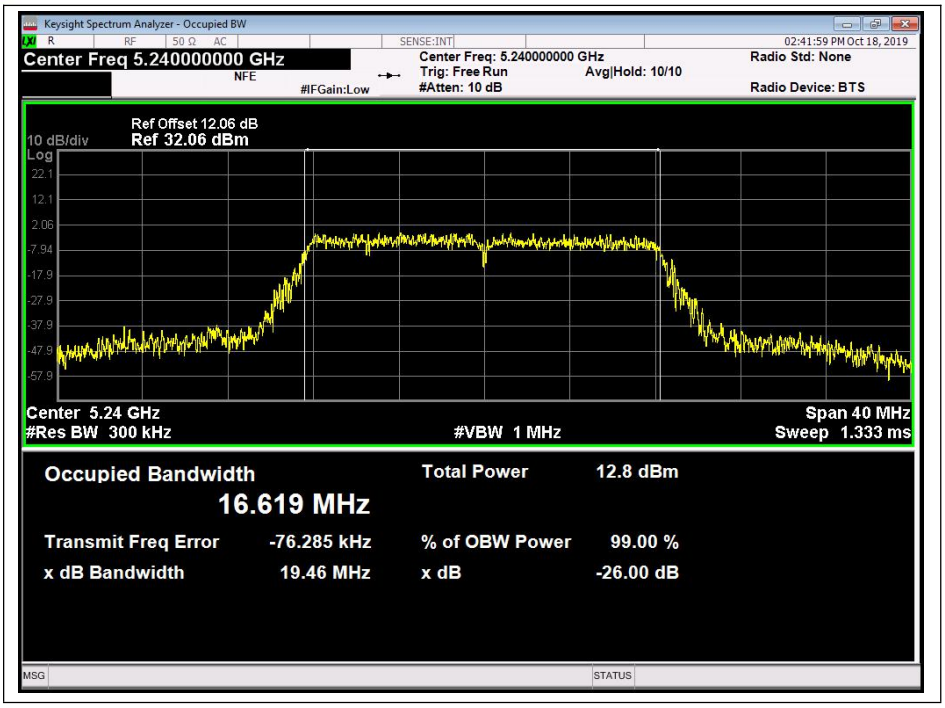
B. Test Plots



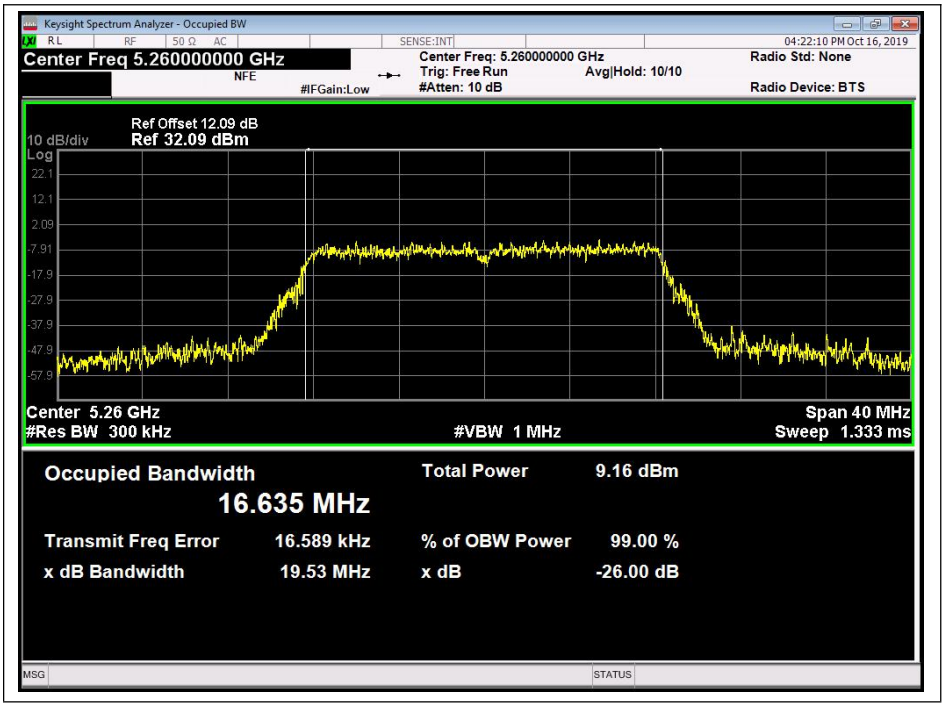
(Channel 36, 5180MHz, 802.11a)



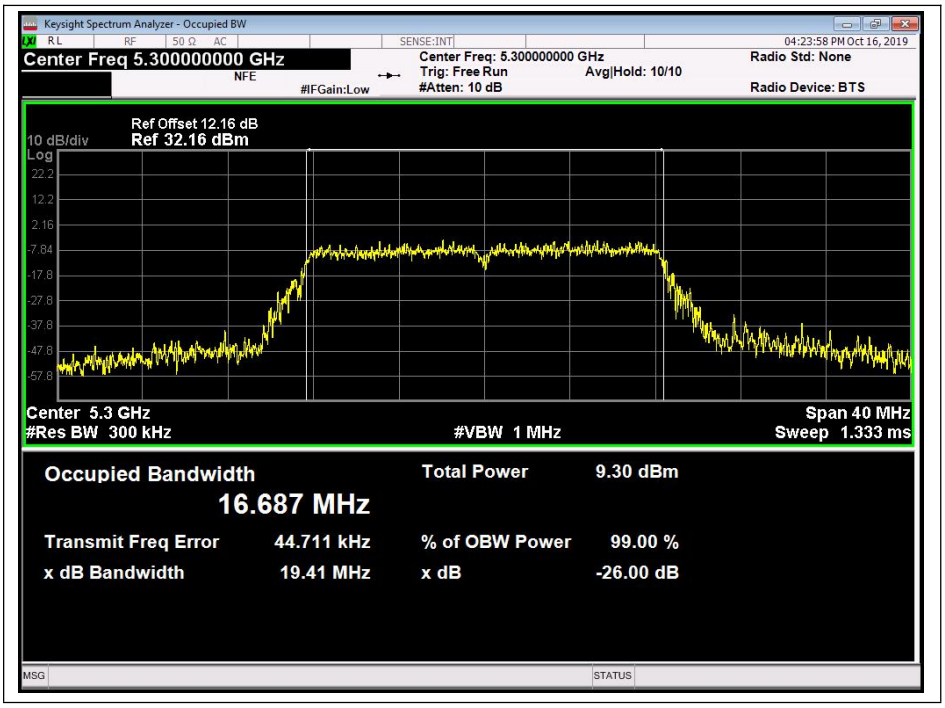
(Channel 44, 5220 MHz, 802.11a)



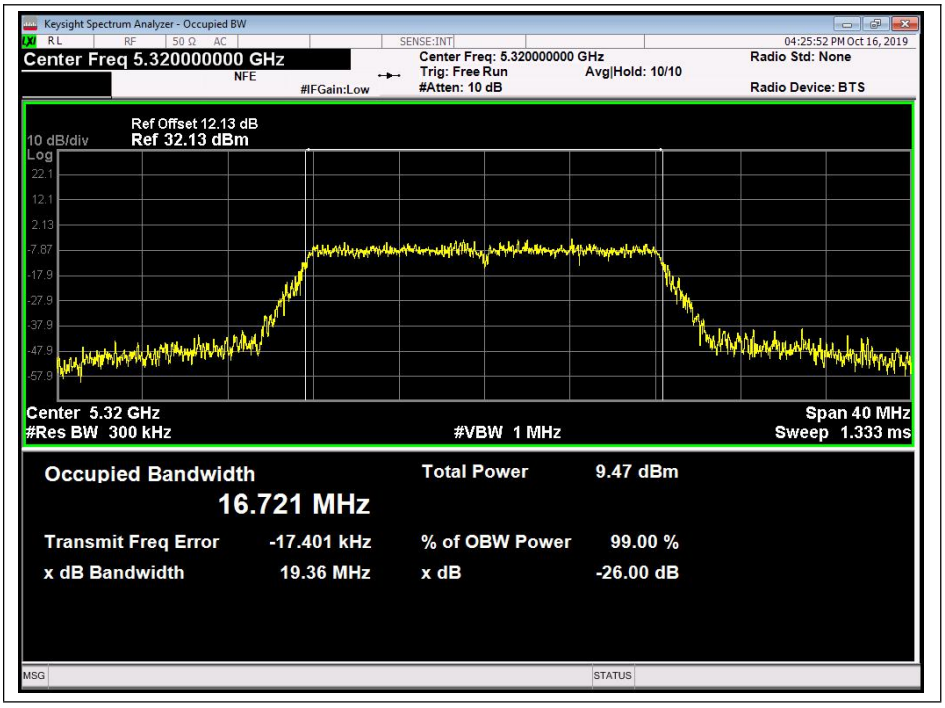
(Channel 48, 5240MHz, 802.11a)



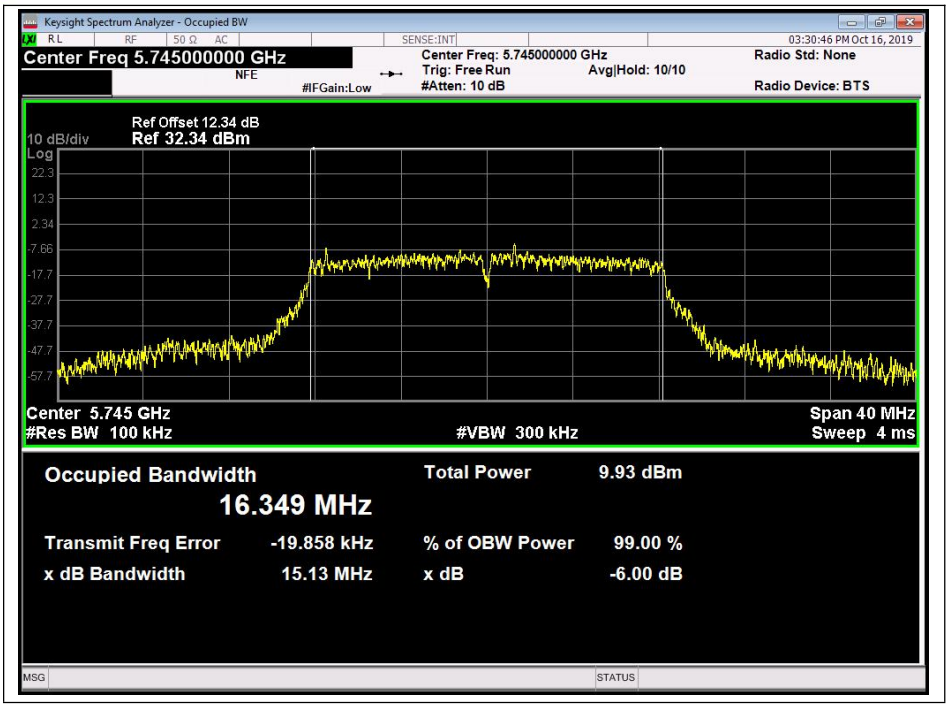
(Channel 52, 5260MHz, 802.11a)



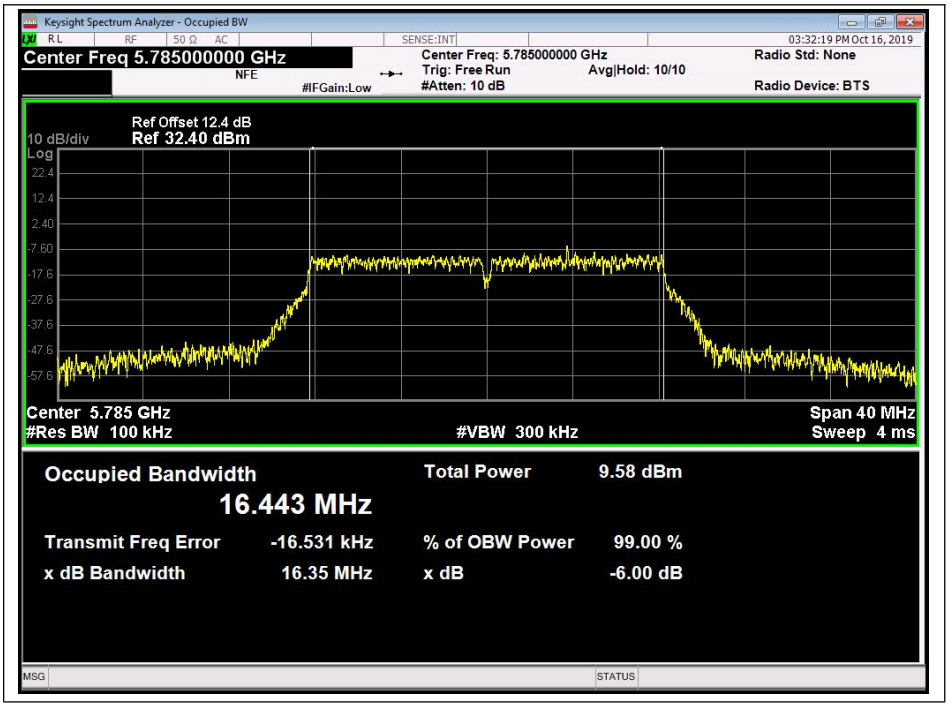
(Channel 60, 5300 MHz, 802.11a)



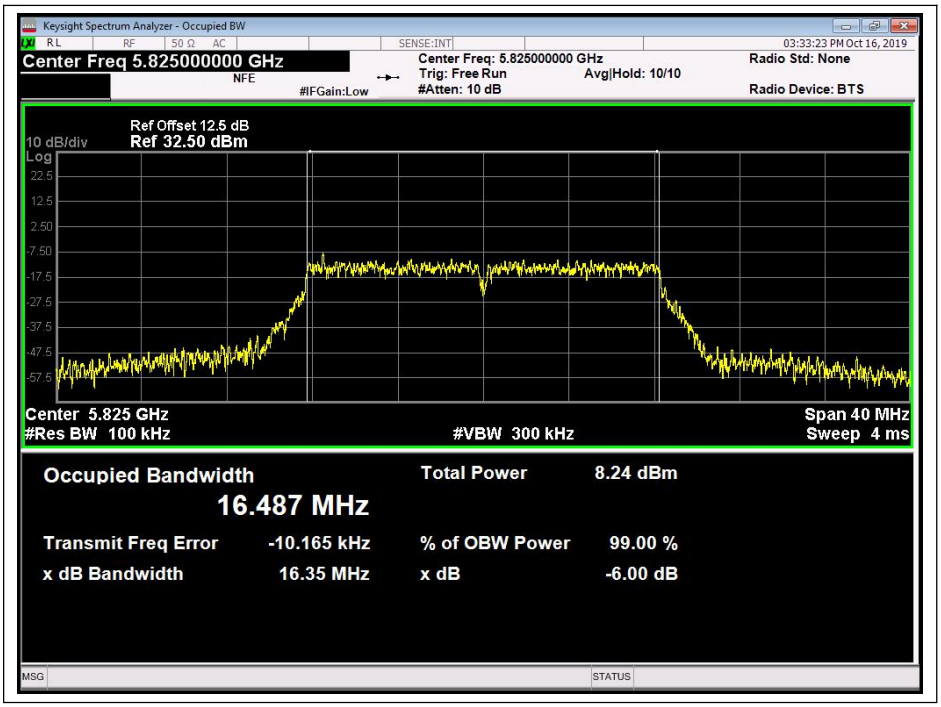
(Channel 64, 5320MHz, 802.11a)



(Channel 149, 5745MHz, 802.11a)



(Channel 157, 5785MHz, 802.11a)



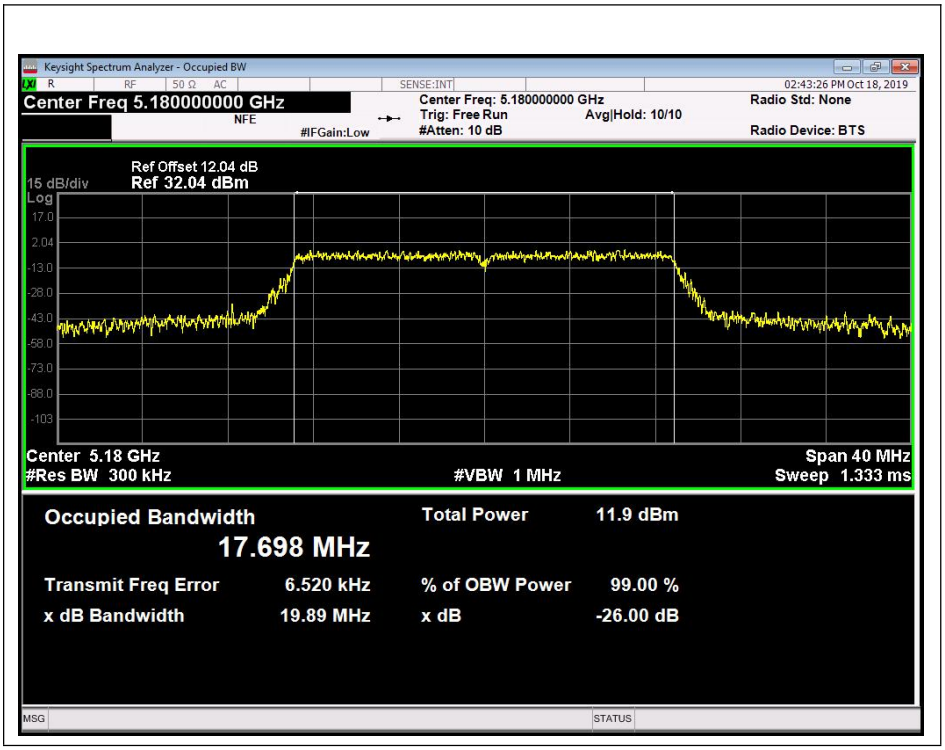
(Channel 165, 5825MHz, 802.11a)

802.11n (HT20) Test mode

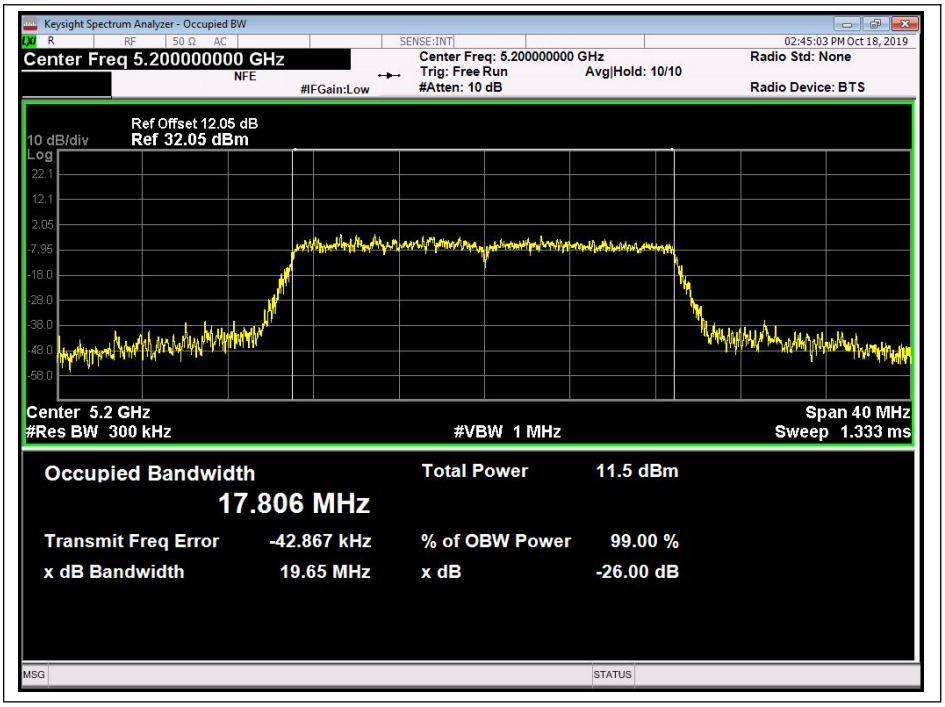
A. Test Verdict:

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
36	5180	19.89
44	5220	19.95
48	5240	19.77
52	5260	19.73
60	5300	19.96
64	5320	19.73
Channel	**Frequency (MHz)**	**6dB Bandwidth (MHz)**
149	5745	17.59
157	5785	17.62
165	5825	17.66

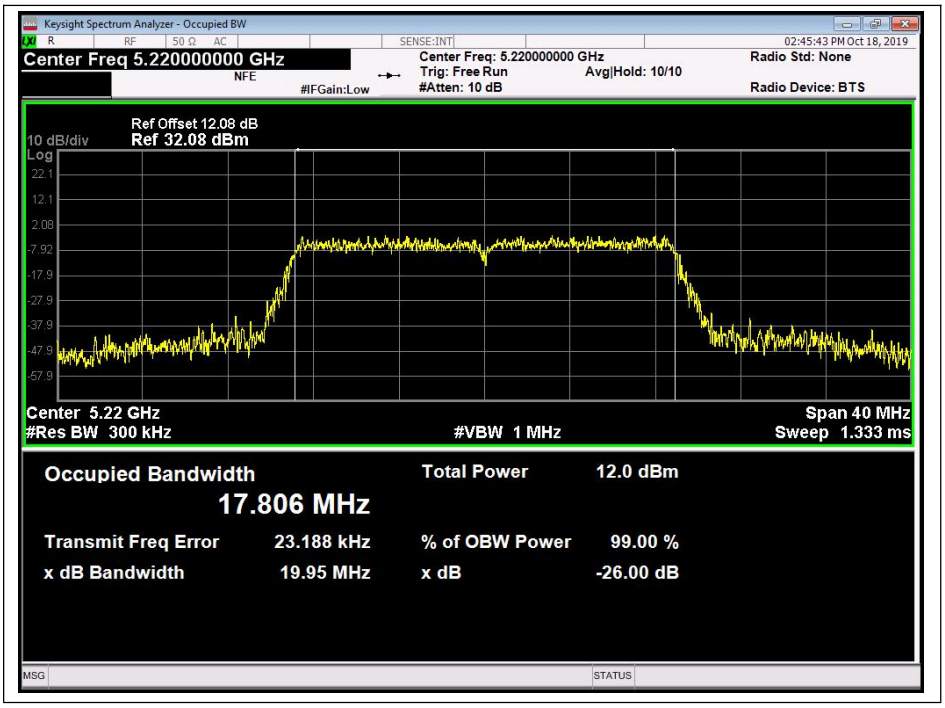
B. Test Plots



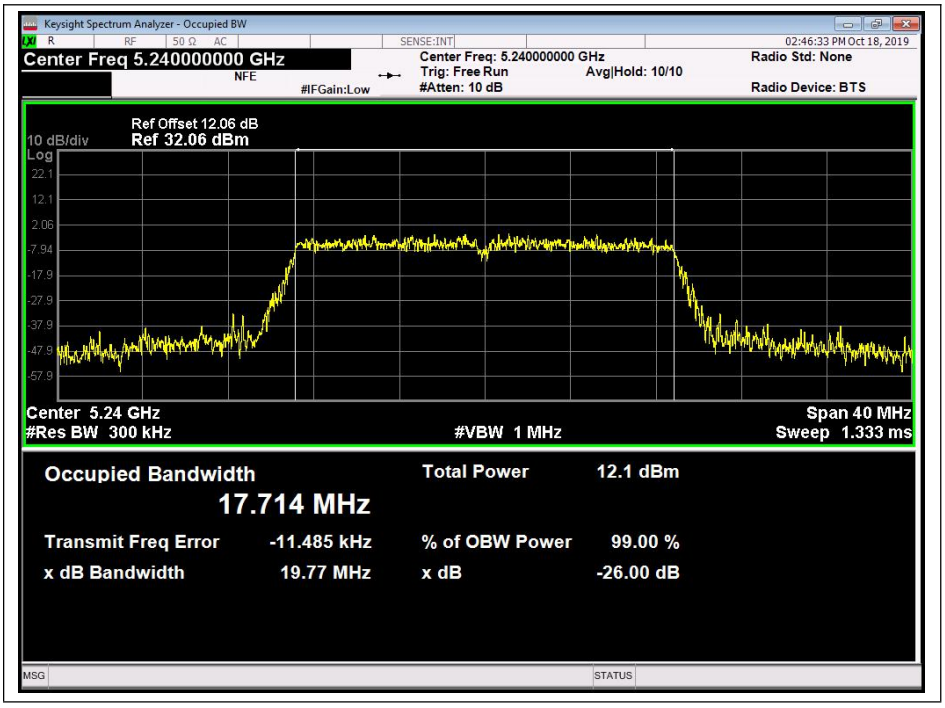
(Channel 36, 5180MHz, 802.11 n (HT20))



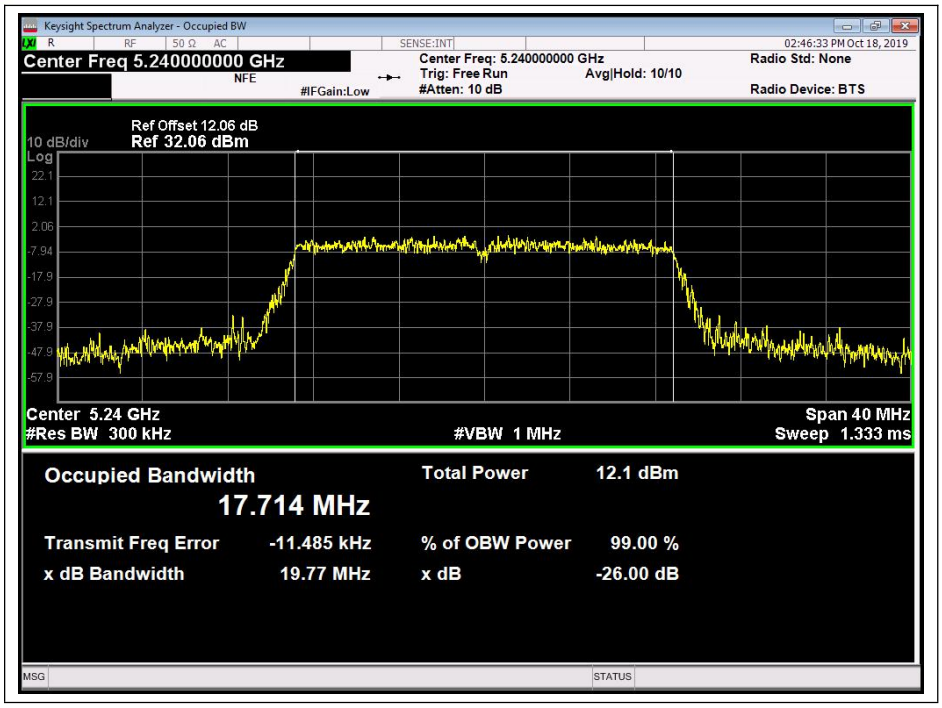
(Channel 40, 5200 MHz, 802.11 n (HT20))



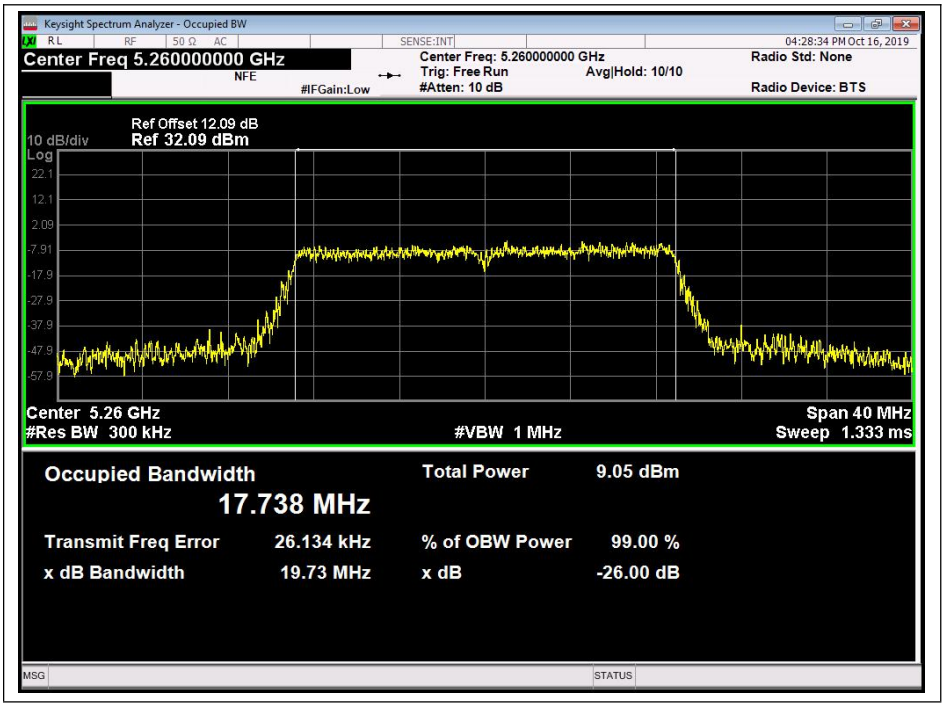
(Channel 44, 5220 MHz, 802.11 n (HT20))



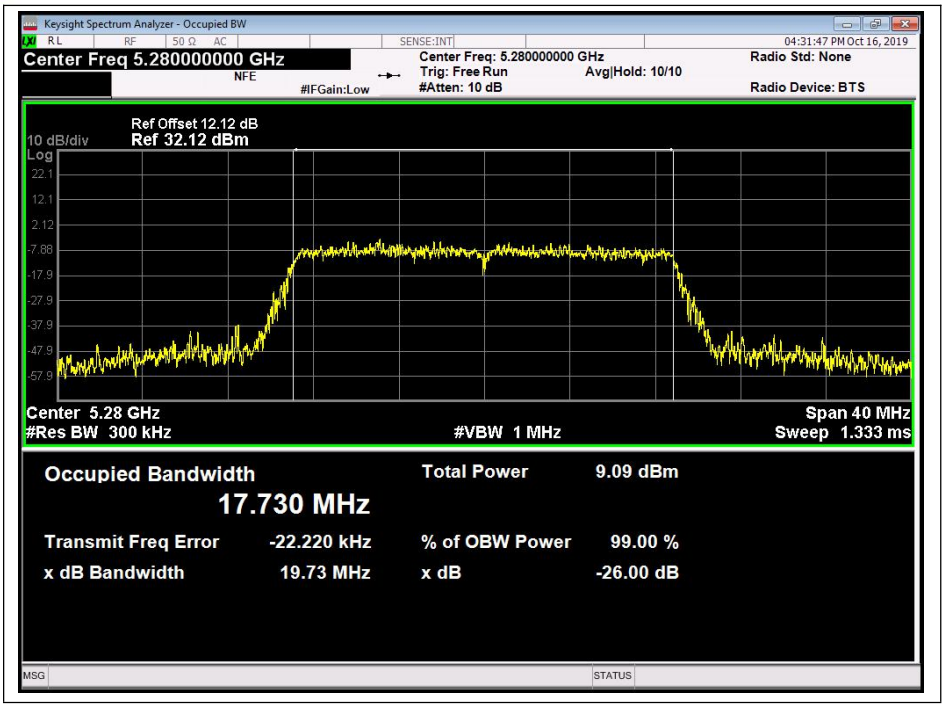
(Channel 48, 5240MHz, 802.11 n (HT20))



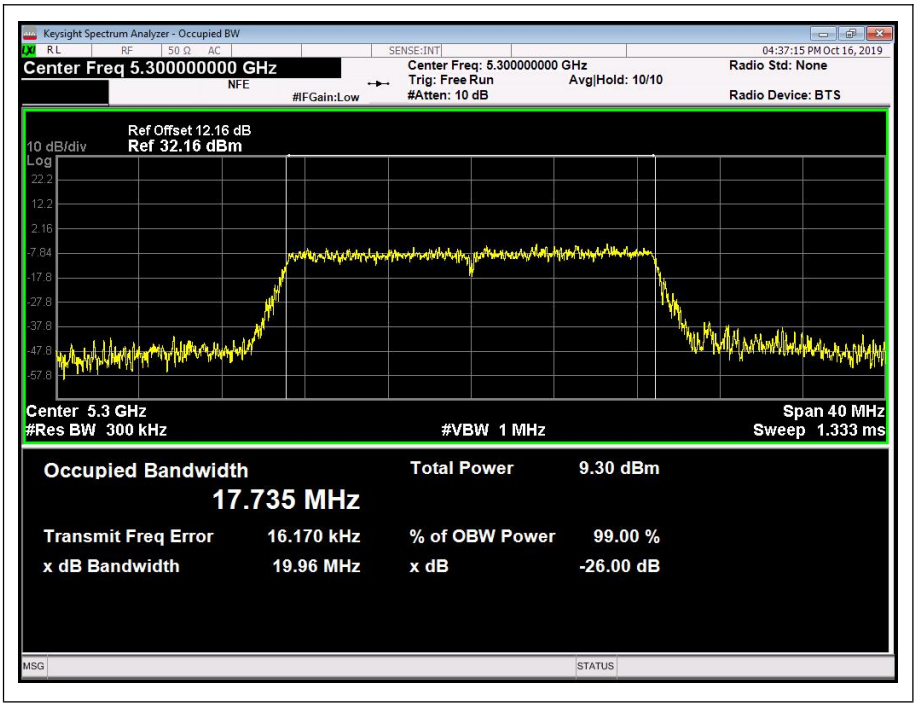
(Channel 48, 5240MHz, 802.11 n (HT20))



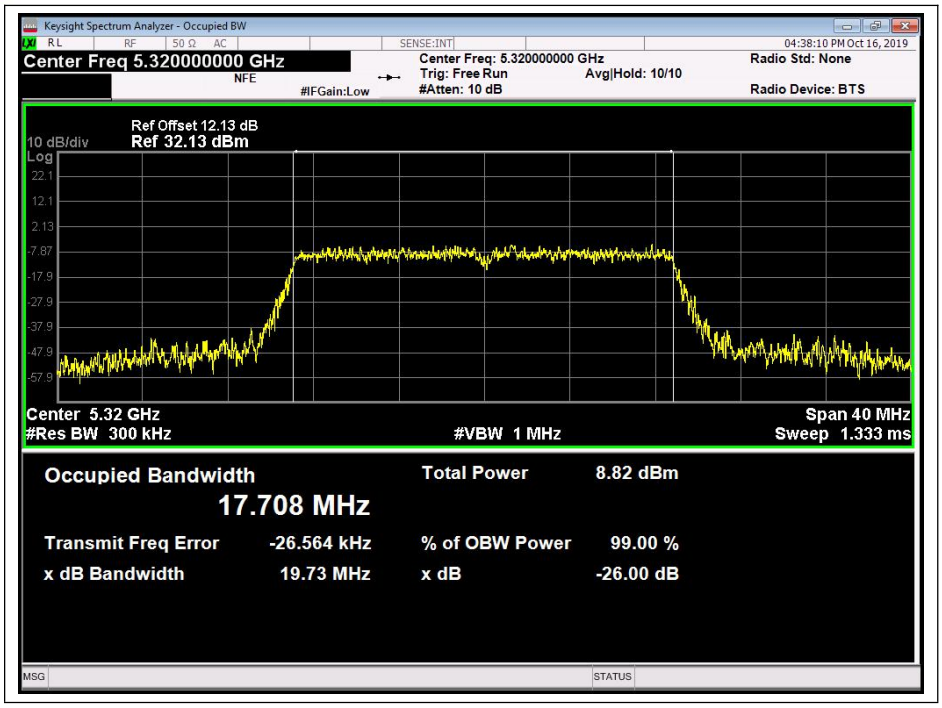
(Channel 52, 5260MHz, 802.11 n (HT20))



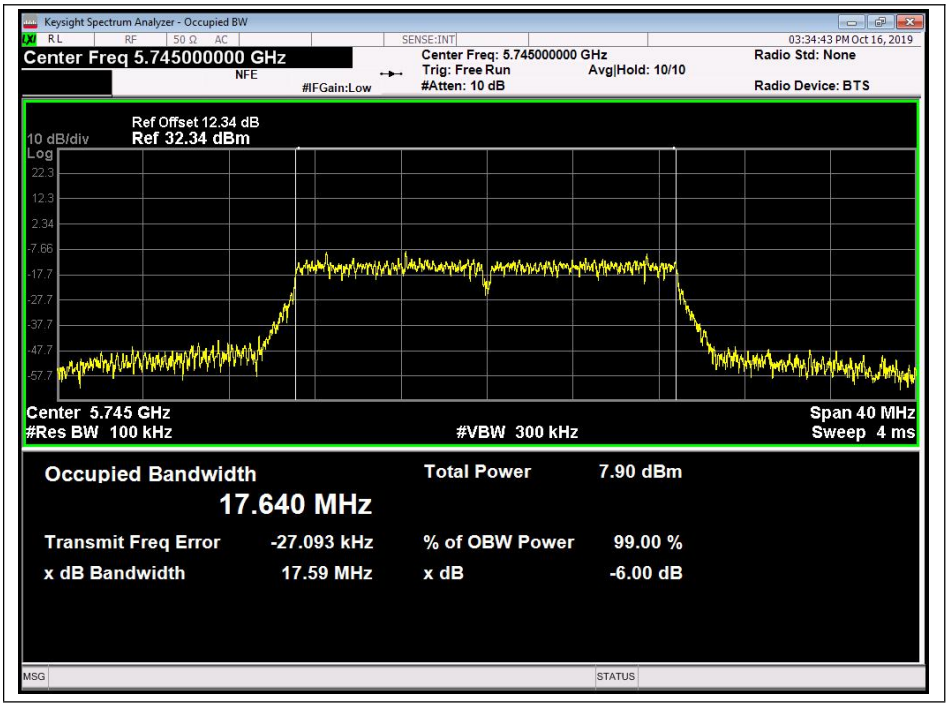
(Channel 56, 5280 MHz, 802.11 n (HT20))



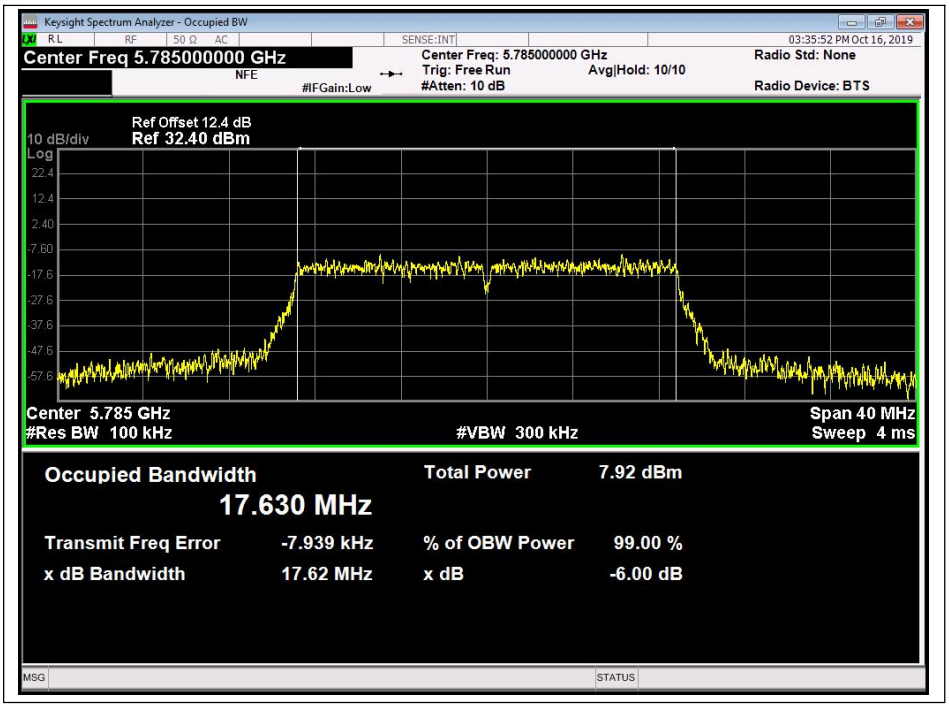
(Channel 60, 5300 MHz, 802.11 n (HT20))



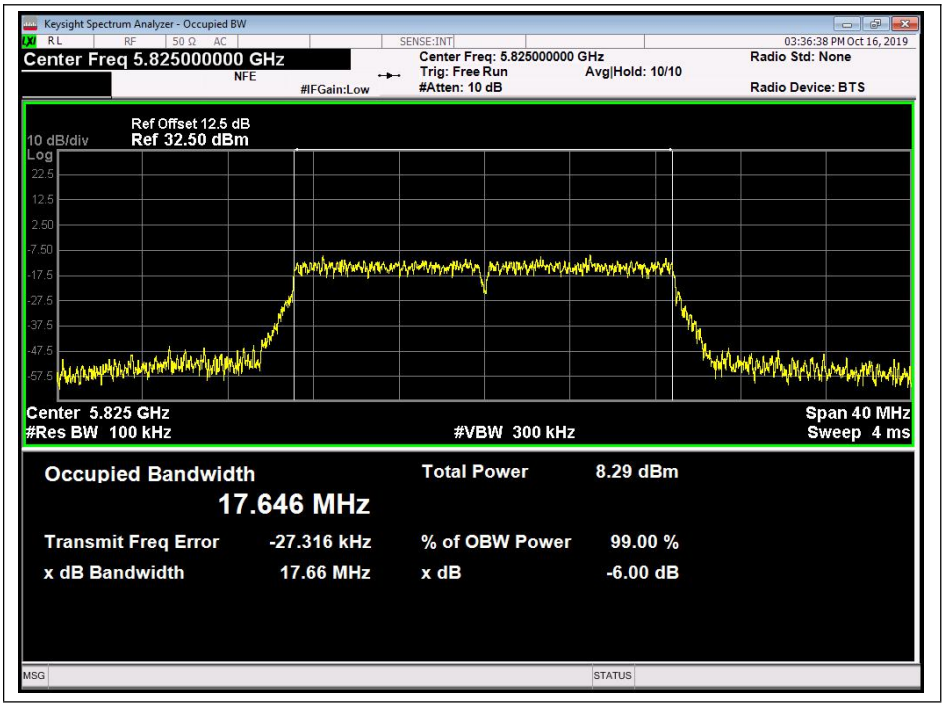
(Channel 64, 5320MHz, 802.11 n (HT20))



(Channel 149, 5745MHz, 802.11 n (HT20))



(Channel 157, 5785MHz, 802.11 n (HT20))



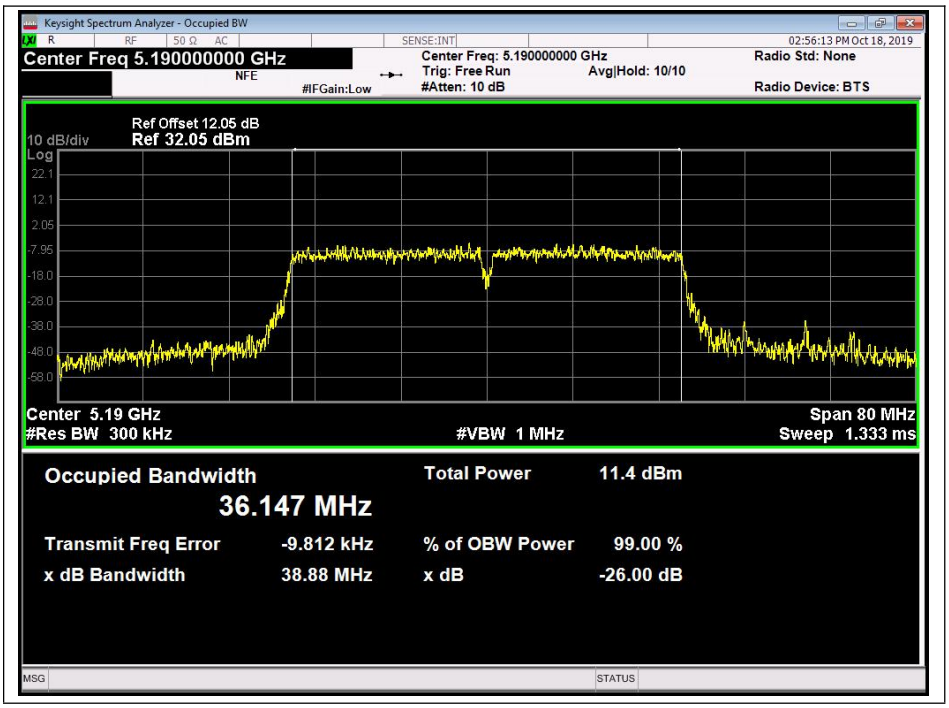
(Channel 165, 5825MHz, 802.11 n (HT20))

802.11n (HT40) Test mode

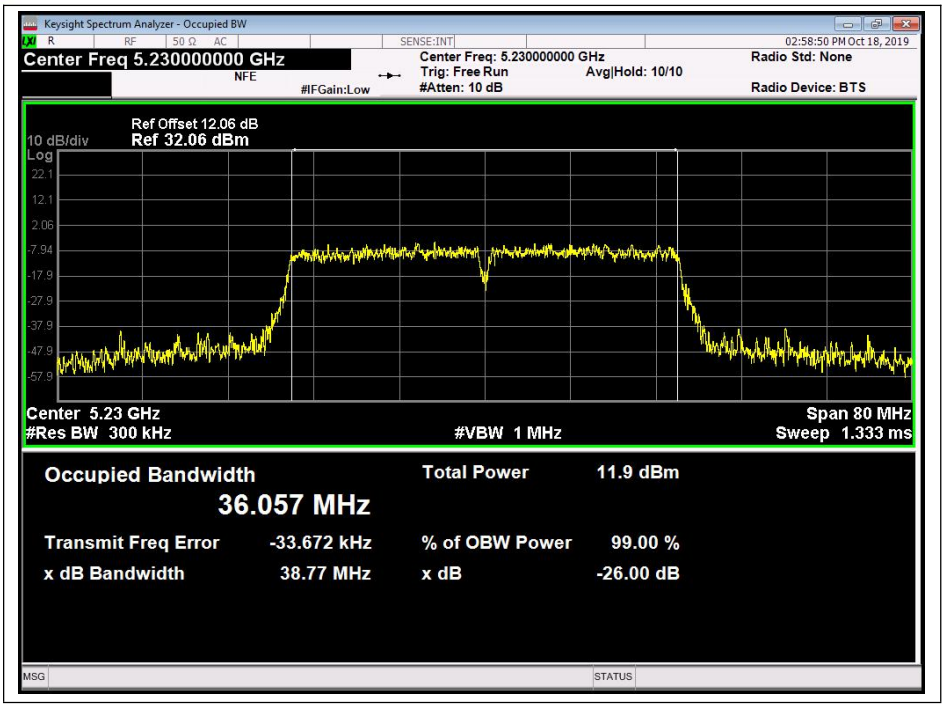
A. Test Verdict:

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
38	5190	38.88
46	5230	38.77
54	5270	38.64
62	5310	39.55
Channel	**Frequency (MHz)**	**6dB Bandwidth (MHz)**
151	5755	35.55
159	5795	35.55

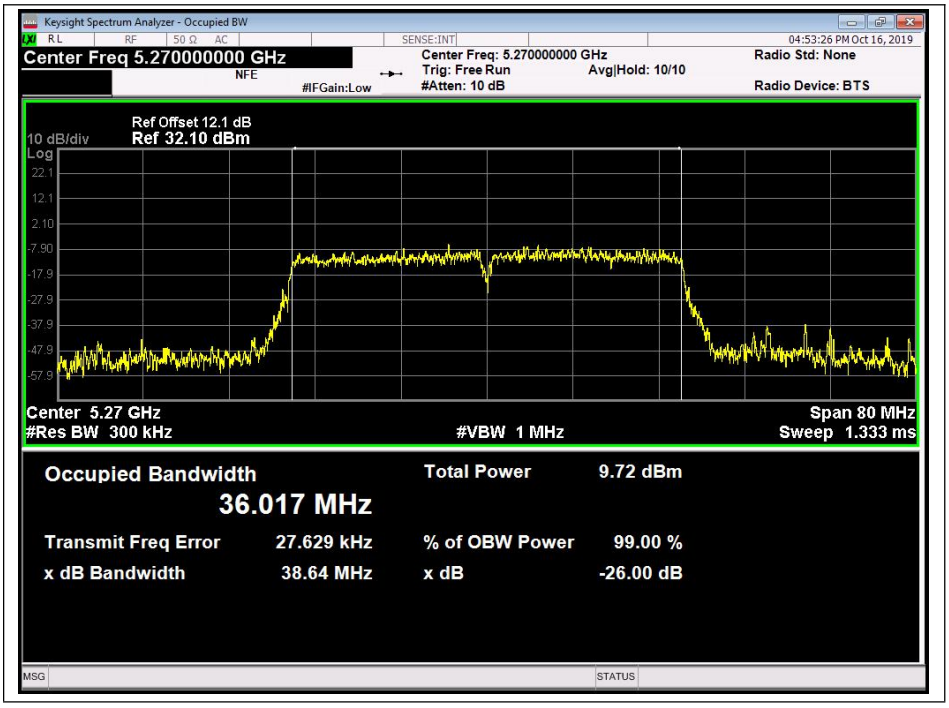
B. Test Plots



(Channel 38, 5190MHz, 802.11n (HT40))

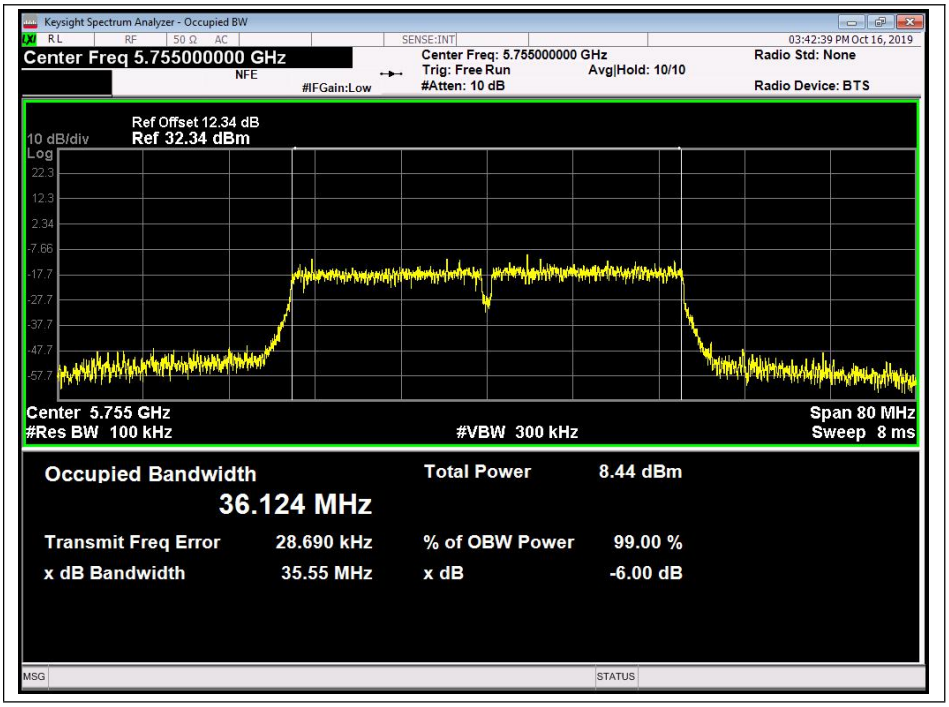


(Channel 46, 5230 MHz, 802.11n (HT40))

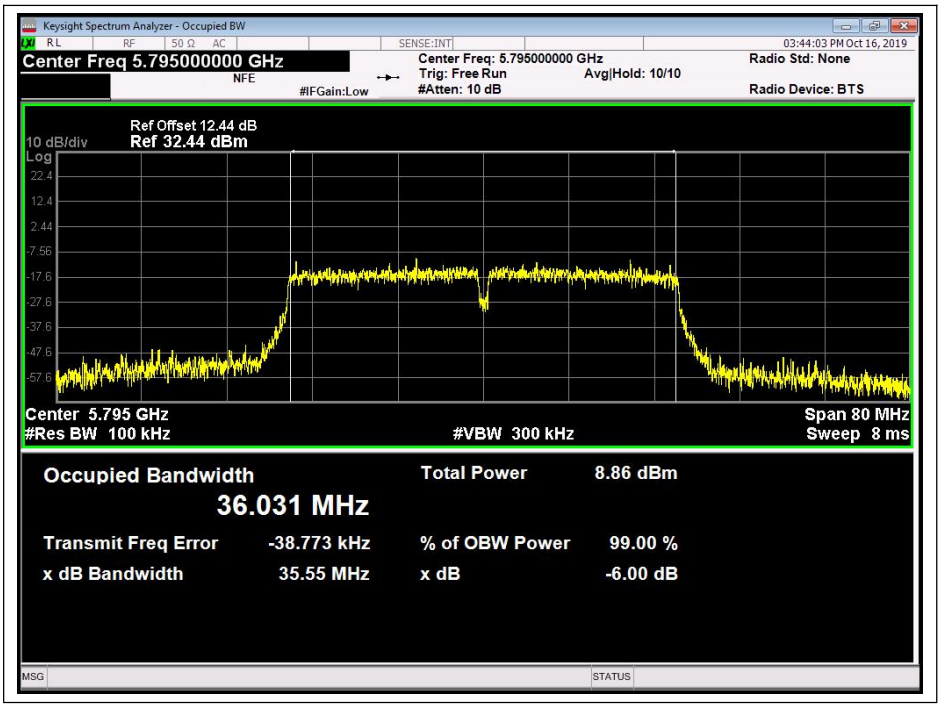


(Channel 54, 5270MHz, 802.11n (HT40))

(Channel 62, 5310 MHz, 802.11n (HT40))



(Channel 151, 5755 MHz, 802.11n (HT40))



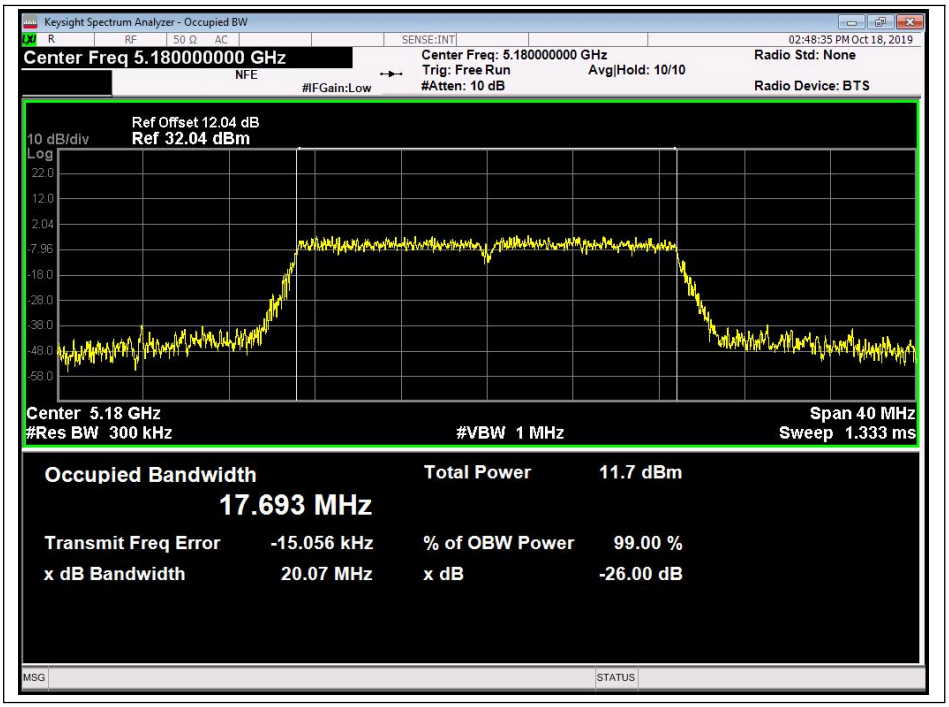
(Channel 159, 5795MHz, 802.11n (HT40))

802.11ac (HT20) Test mode

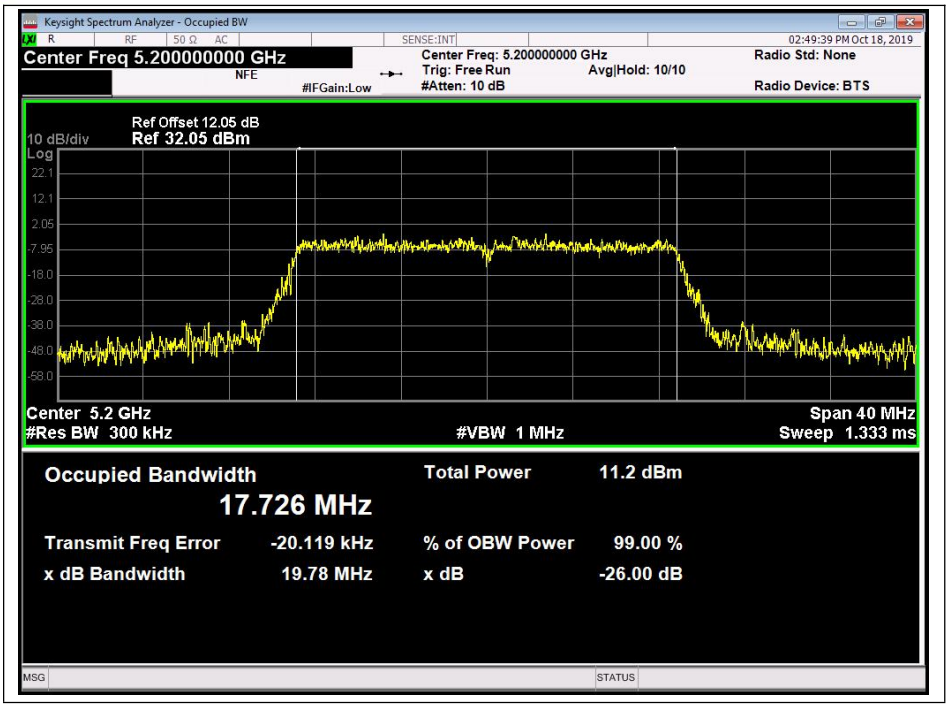
C. Test Verdict:

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
36	5180	20.07
40	5200	19.78
44	5220	20.07
48	5240	19.73
52	5260	19.96
56	5280	19.87
60	5300	20.00
64	5320	19.72
Channel	**Frequency (MHz)**	**6dB Bandwidth (MHz)**
149	5745	17.54
157	5785	17.62
165	5825	17.42

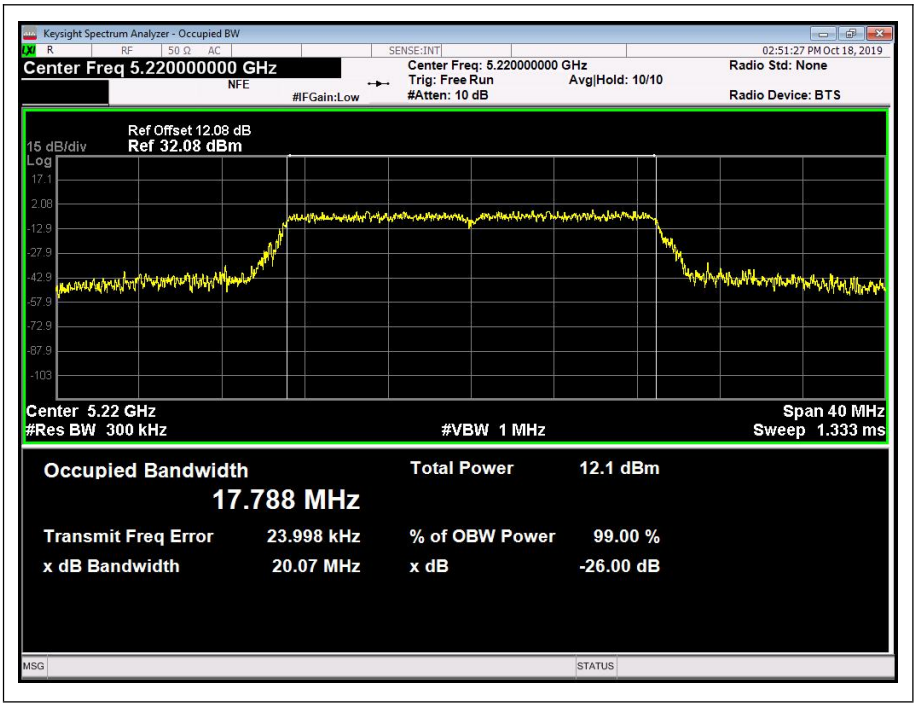
C. Test Plots



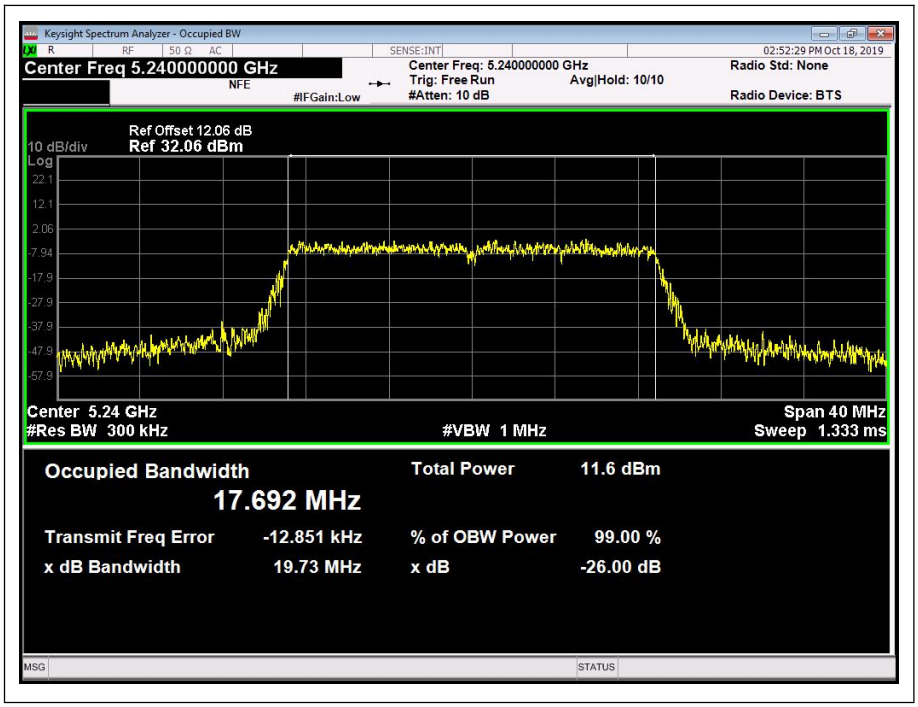
(Channel 39, 5180MHz, 802.11ac (HT20))



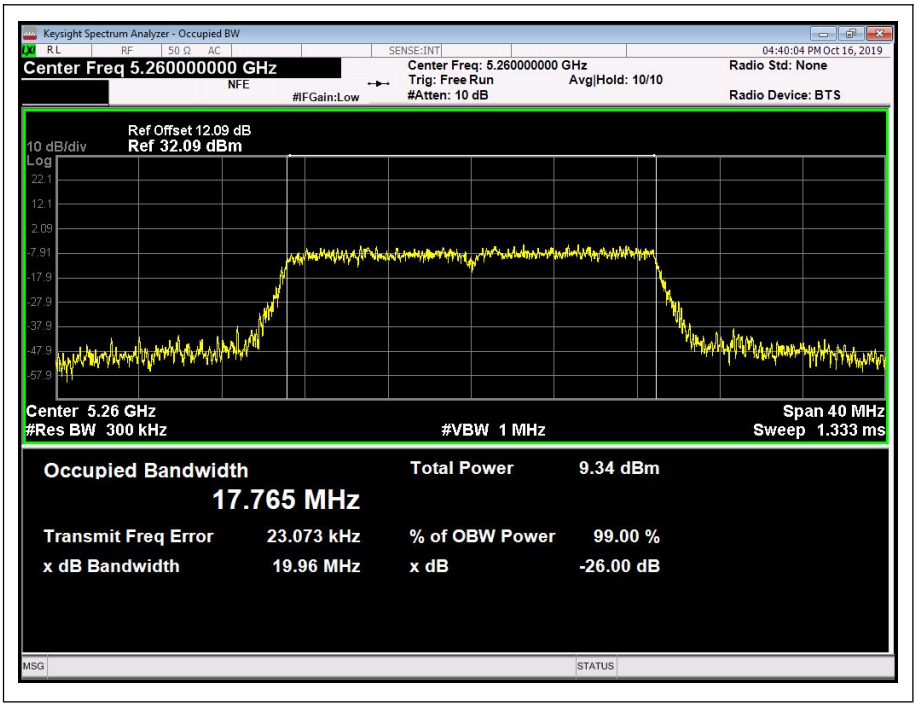
(Channel 40, 5200MHz, 802.11ac (HT20))



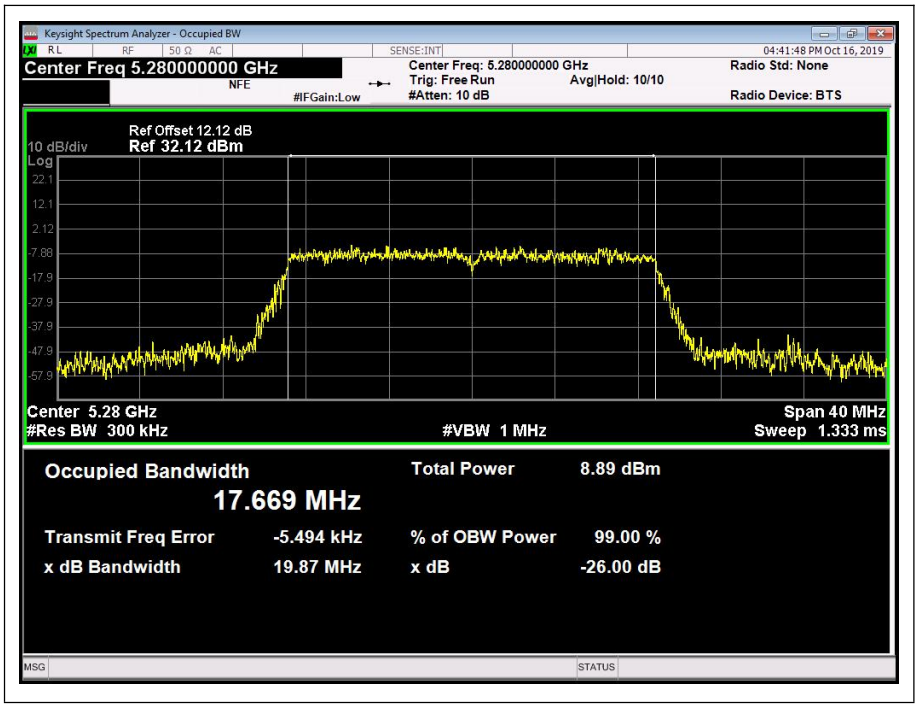
(Channel 44, 5220MHz, 802.11ac (HT20))



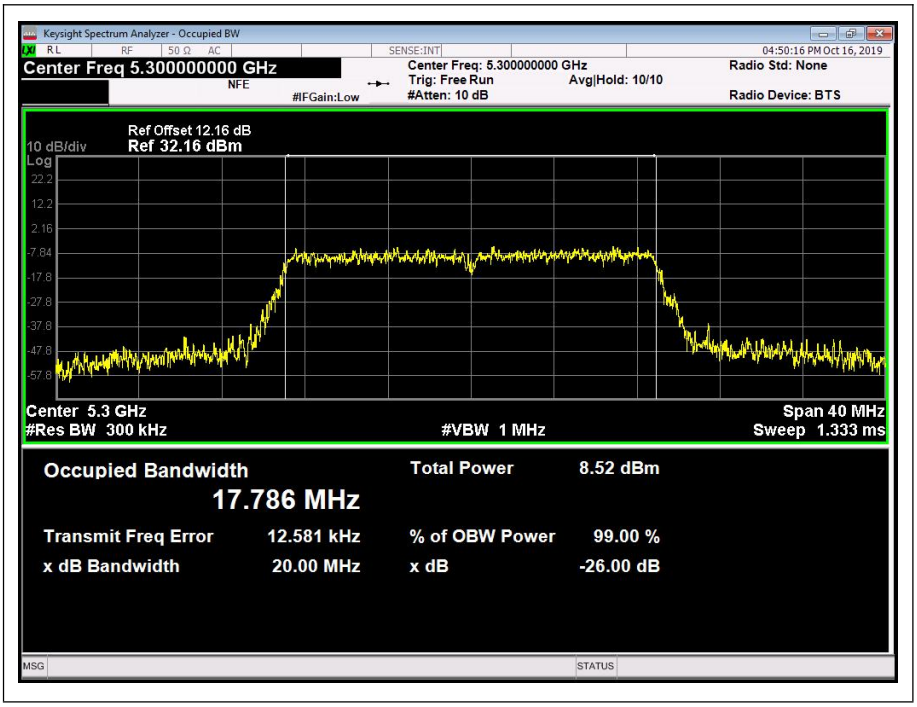
(Channel48, 5240MHz, 802.11ac (HT20))



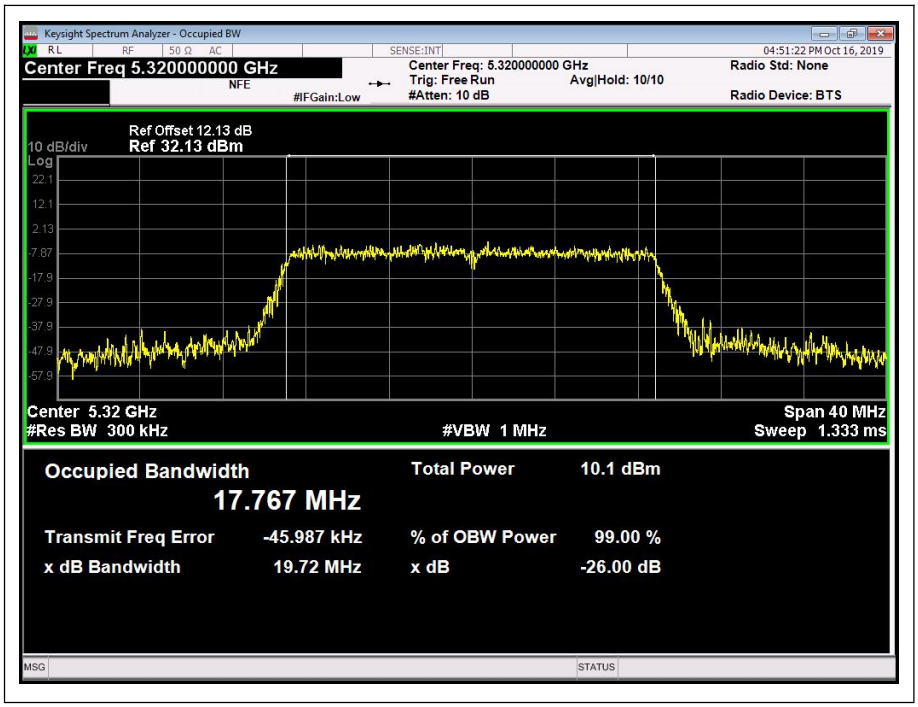
(Channel52, 5260MHz, 802.11ac (HT20))



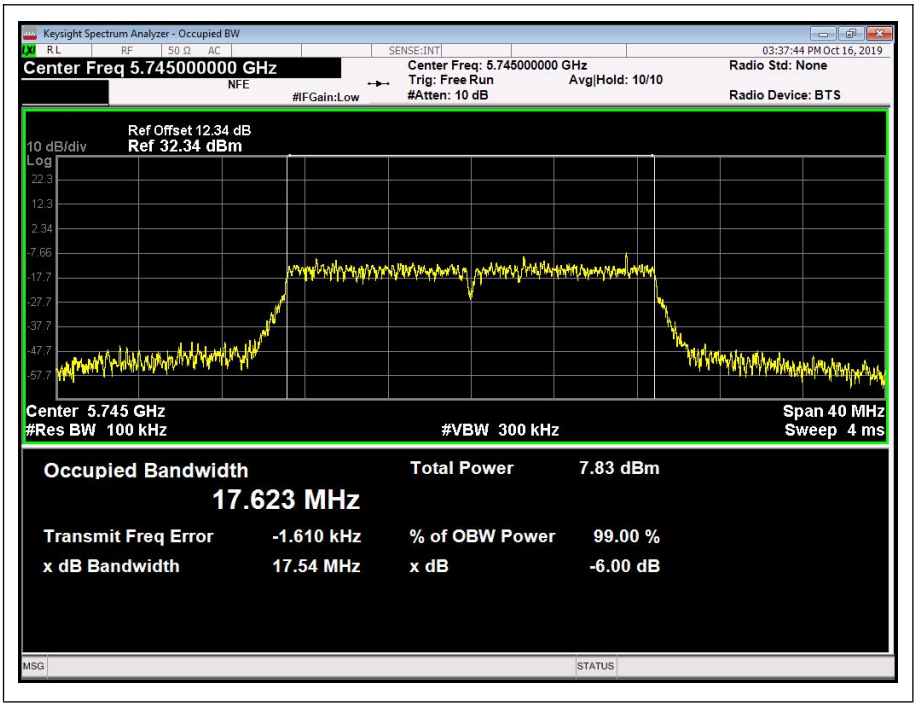
(Channel56, 5280MHz, 802.11ac (HT20))



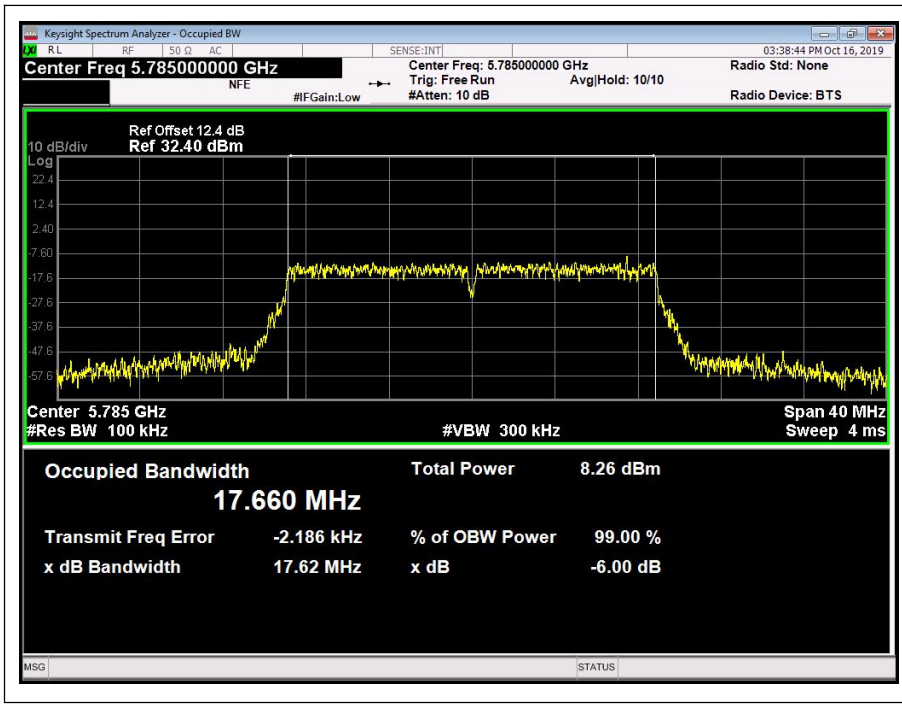
(Channel60, 5300MHz, 802.11ac (HT20))



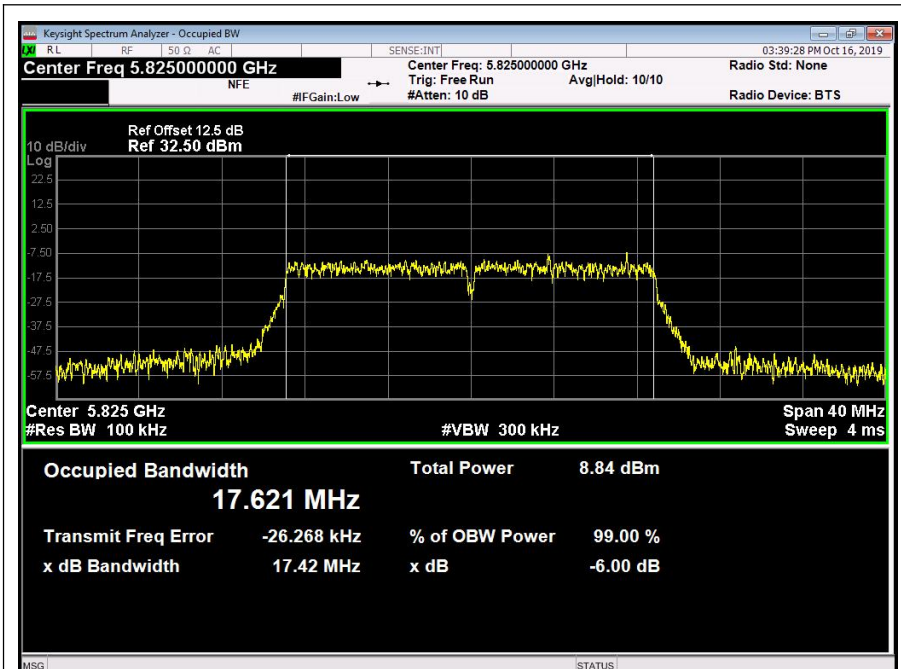
(Channel64, 5320MHz, 802.11ac (HT20))



(Channel149, 5745MHz, 802.11ac (HT20))



(Channel157, 5785MHz, 802.11ac (HT20))



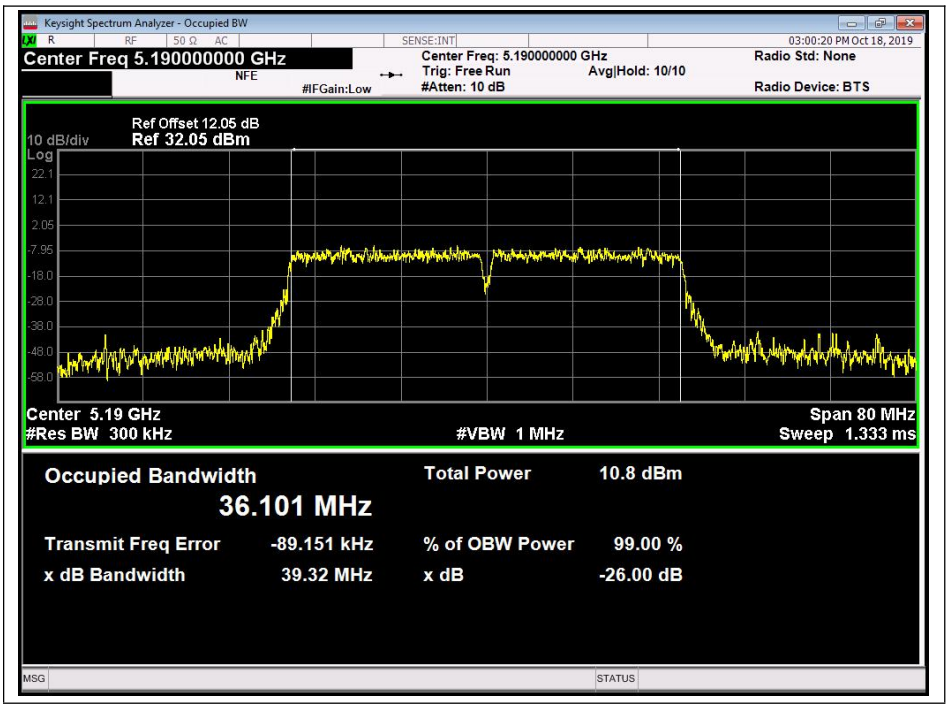
(Channel165, 5825MHz, 802.11ac (HT20))

802.11ac (HT40) Test mode

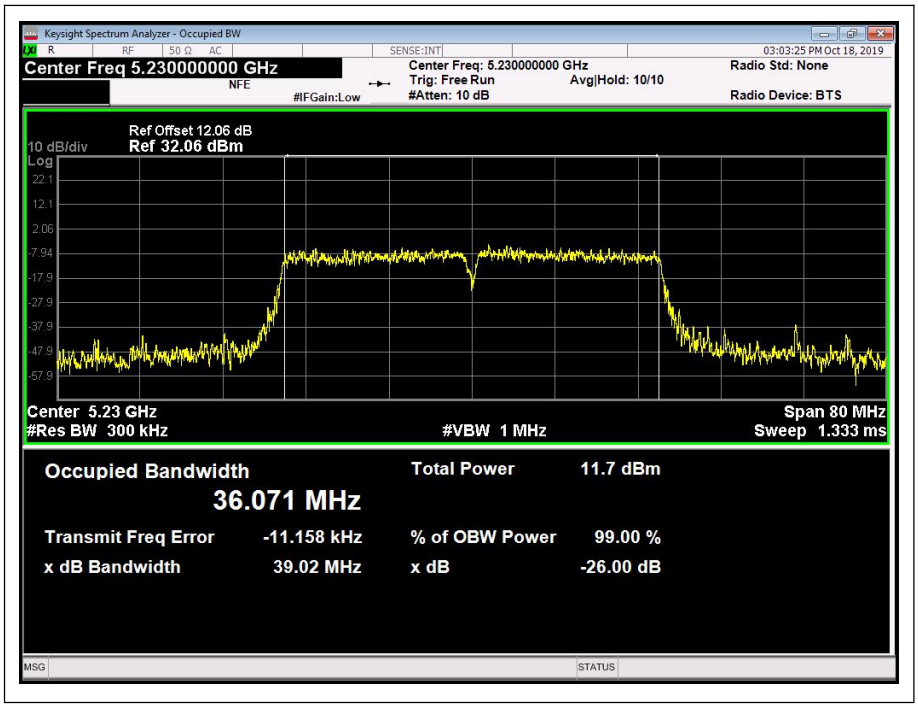
D. Test Verdict:

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
38	5190	39.32
46	5230	39.02
54	5270	38.91
62	5310	39.24
Channel	**Frequency (MHz)**	**6dB Bandwidth (MHz)**
151	5755	31.63
159	5795	35.45

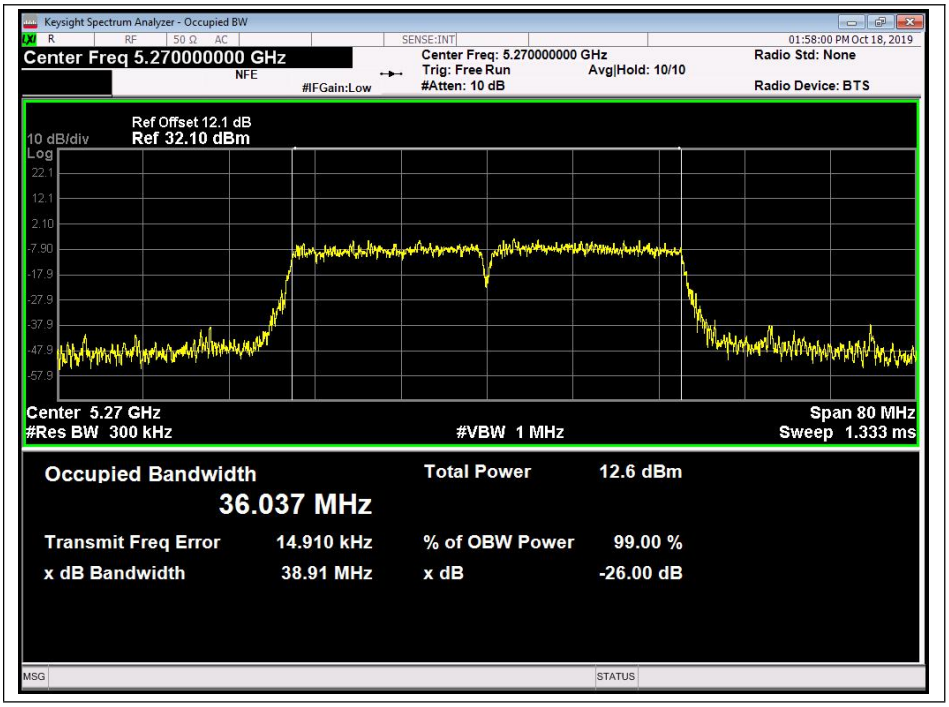
E. Test Plots



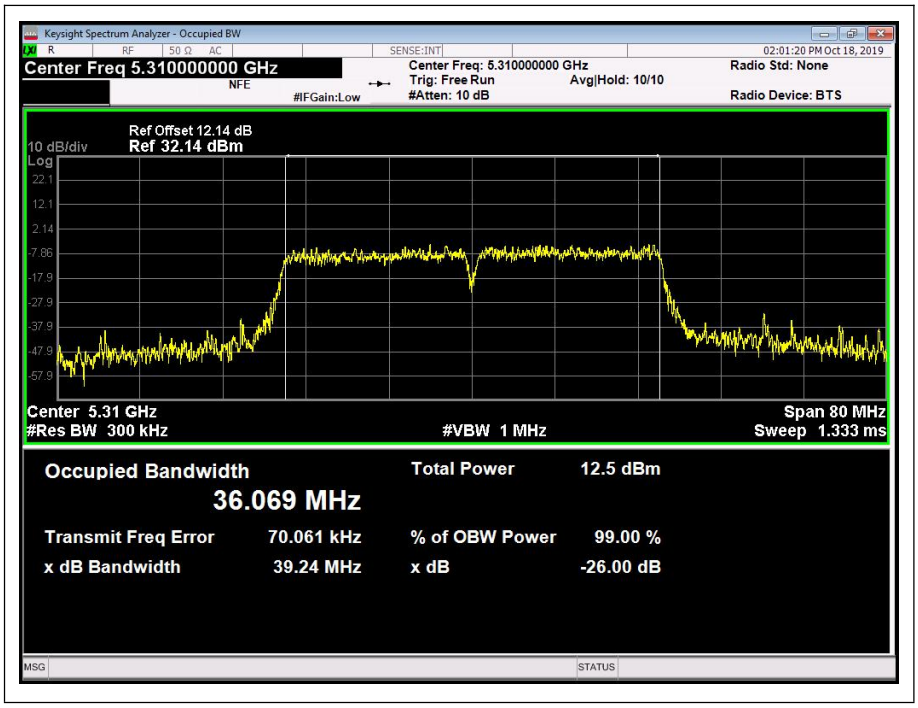
(Channel 38, 5190MHz, 802.11ac (HT40))



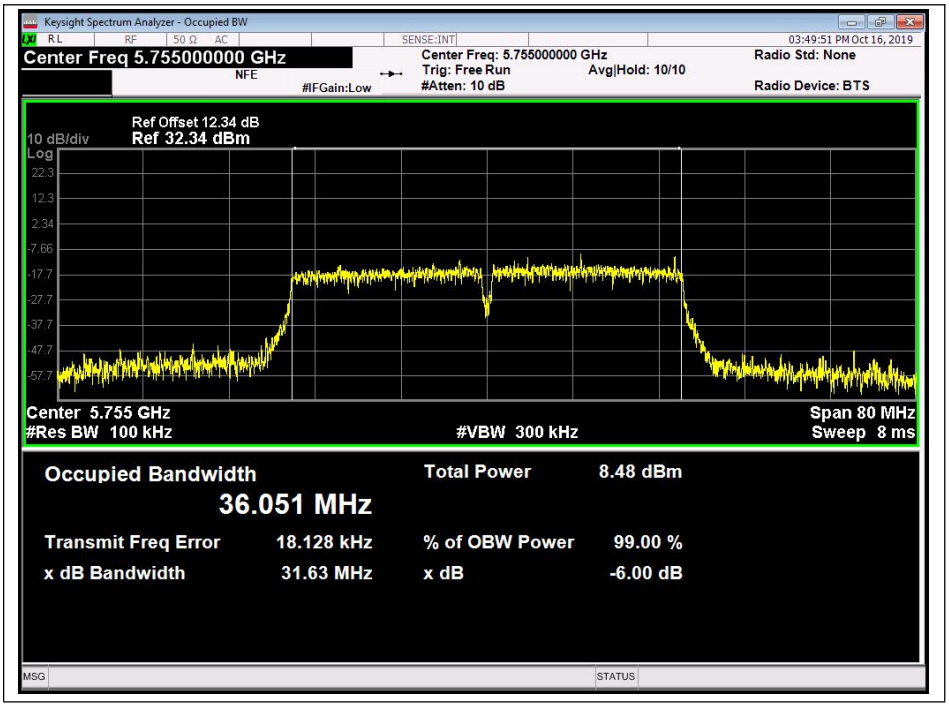
(Channel 46, 5230 MHz, 802.11ac (HT40))



(Channel 54, 5270MHz, 802.11ac (HT40))



(Channel 62, 5310 MHz, 802.11ac (HT40))



(Channel 151, 5755 MHz, 802.11ac (HT40))