TEST REPORT

of

FCC Part 15 Subpart E §15.407 / RSS-210 Issue 8, RSS-Gen Issue 3

FCC ID/IC Certification : A3LXE503C32 / 649E-XE503C32

Equipment Under Test	:	SAMSUNG Notebook
Model Name	:	XE503C32
Serial No.	:	N/A
Applicant	:	SAMSUNG ELECTRONICS CO., LTD.
Manufacturer	:	SAMSUNG ELECTRONICS CO., LTD.
Date of Test(s)	:	2014.02.24 ~ 2014.03.07
Date of Issue	:	2014.03.11

In the configuration tested, the EUT complied with the standards specified above.

Tested By:	**Wonjun Sim**	**Date**	**2014.03.11**
Approved By:	**Feel Jeong**	**Date**	**2014.03.11**

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1. General information

1.1 Testing laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)
- Wireless Div. 3FL, 4, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 435-040

All SGS services are rendered in accordance with the applicable SGS conditions of service available on request and accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx.

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1.2 Details of applicant

Applicant : SAMSUNG ELECTRONICS CO., LTD.
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Contact Person : Lee, Sang-Cheong
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1.3. Description of EUT

Kind of Product		SAMGSUNG NOTE PC
Model Name		XE503C32
Power Supply		DC 7.6 V
Frequency Range		2 402 ㎒ ~ 2 480 ㎒ (BT, BT LE), 2 412 ㎒ ~ 2 462 ㎒ (11b/g/n_HT20), 2 422 ㎒ ~ 2 452 ㎒ (11n_HT40), 5 745 ㎒ ~ 5 825 ㎒ (11a/n_HT20, 11ac_VHT20), 5 755 ㎒ ~ 5 795 ㎒ (11n_HT40, 11ac_VHT40), 5 775 ㎒ (11ac_VHT80), 5 180 ㎒ ~ 5 240 ㎒ (11a/n_HT20 – Non DFS, 11ac_VHT20 – Non DFS), 5 190 ㎒ ~ 5 230 ㎒ (11n_HT40 – Non DFS, 11ac_VHT40 – Non DFS), 5 210 ㎒ (11ac_VHT80 – Non DFS), 5 260 ㎒ ~ 5 320 ㎒ (11a/n_HT20 – DFS, 11ac_VHT20 – DFS), 5 270 ㎒ ~ 5 310 ㎒ (11n_HT40 – DFS, 11ac_VHT40 – DFS), 5 290 ㎒ (11ac_VHT80 – DFS), 5 500 ㎒ ~ 5 720 ㎒ (11a/n_HT20 – DFS, 11ac_VHT20 – DFS), 5 510 ㎒ ~ 5 710 ㎒ (11n_HT40 – DFS, 11ac_VHT40 – DFS), 5 530 ㎒ ~ 5 690 ㎒ (11ac_VHT80 – DFS)
Modulation Technique		DSSS, OFDM, GFSK, π/4DQPSK, 8DPSK
Number of Channels		11 channel (11b/g/n_HT20), 7 channel (11n_HT40), 5 channel (11a/n_HT20, 11ac_VHT20), 2 channel (11n_HT40, 11ac_VHT40), 1 channel (11ac_VHT80), 4 channel (11a/n_HT20–Non DFS, 11ac_VHT20–Non DFS), 2 channel (11n_HT40 – Non DFS, 11ac_VHT40–Non DFS), 1 channel (11ac_VHT80–Non DFS), 13 channel (11a/n_HT20 – DFS, 11ac_VHT20 – DFS), 6 channel (11n_HT40 – DFS, 11ac_VHT40 – DFS), 3 channel (11ac_VHT80 – DFS), 79 channel (BT,), 40 channel (BT LE)
Antenna Type		Internal type (MIMO)
Antenna Gain	**ANT0 (Main)**	2 402 ㎒ ~ 2 480 ㎒, 2 412 ㎒ ~ 2 472 ㎒: -2.60 ㏈ i, 5 180 ㎒ ~ 5 320 ㎒: -1.88 ㏈ i,5 500 ㎒ ~ 5 720 ㎒: -3.55 ㏈ i, 5 745 ㎒ ~ 5 805 ㎒: -3.99 ㏈ i
	ANT1 (Aux)	2 402 ㎒ ~ 2 480 ㎒, 2 412 ㎒ ~ 2 472 ㎒: -3.08 ㏈ i, 5 180 ㎒ ~ 5 320 ㎒: -3.29 ㏈ i,5 500 ㎒ ~ 5 720 ㎒: -3.77 ㏈ i, 5 745 ㎒ ~ 5 805 ㎒: -3.97 ㏈ i

1.4. Declaration by the manufacturer

- EUT is SLAVE without DFS and TPC

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1.5. Test equipment list

Equipment	Manufacturer	Model	S/N	Cal Date	Cal Interval	Cal Due.
Signal Generator	R&S	SMR40	100272	Aug. 23, 2013	Annual	Aug. 23, 2014
Spectrum Analyzer	Agilent	N9030A	US51350132	Oct. 08, 2013	Annual	Oct. 08, 2014
Spectrum Analyzer	R&S	FSW43	100637	Jul. 26, 2013	Annual	Jul. 26, 2014
Spectrum Analyzer	R&S	FSL6	100639	Jun. 26, 2013	Annual	Jun. 26, 2014
Attenuator	AEROFLEX / INMET	26A-10dB	3	Apr. 05, 2013	Annual	Apr. 05, 2014
Attenuator	AEROFLEX / INMET	18N-20dB	3	Apr. 01, 2013	Annual	Apr. 01, 2014
Power Divider	KRYTAR	6005265	144967	May 29, 2013	Annual	May 29, 2014
High Pass Filter	Wainwright	WHK7.5/26.5G-6SS	11	Jun. 08, 2013	Annual	Jun. 08, 2014
Low Pass Filter	Mini circuits	NLP-1200+	V8979400903-2	Mar. 30, 2013	Annual	Mar. 30, 2014
Power Sensor	R&S	NRP-Z81	100669	Apr. 05. 2013	Annual	Apr. 05. 2014
DC Power Supply	Agilent	U8002A	MY50060028	Mar. 28, 2013	Annual	Mar. 28, 2014
Preamplifier	H.P.	8447F	2944A03909	Jun. 28, 2013	Annual	Jun. 28, 2014
Preamplifier	R&S	SCU 18	1391123	Sep. 30, 2013	Annual	Sep. 30, 2014
Preamplifier	MITEQ Inc.	JS44-18004000-35-8P	1546891	Jun. 13, 2013	Annual	Jun. 13, 2014
Test Receiver	R&S	ESU26	100109	Mar. 04, 2014	Annual	Mar. 04, 2015
Bilog Antenna	SCHWARZBECK MESSELEKTRONIK	VULB9163	390	Apr. 19, 2012	Biennial	Apr. 19, 2014
Horn Antenna	R&S	HF906	100326	Nov. 01, 2013	Biennial	Nov. 01, 2015
Horn Antenna	SCHWARZBECK MESSELEKTRONIK	BBHA9170	BBHA9170431	Aug. 24, 2012	Biennial	Aug. 24, 2014
Band Reject Filter	Wainwright Instrument GmbH	WRCJV5150/5350-5130/ 5370-50/16SS	1	Sep. 28, 2013	Annual	Sep. 28, 2014
Band Reject Filter	Wainwright Instrument GmbH	WRCJV5470/5725-5450/ 5745-50/20SS	1	Sep. 28, 2013	Annual	Sep. 28, 2014
Antenna Master	INNCO	MM4000	N/A	N.C.R.	N/A	N.C.R.
Turn Table	INNCO	DS 1200S	N/A	N.C.R.	N/A	N.C.R.
Anechoic Chamber	SY Corporation	L × W × H (6.5 m × 3.5 m × 3.5 m)	N/A	N.C.R.	N/A	N.C.R.
EMI Test Receiver	R&S	ESHSI0	863365/018	Jun, 27. 2013	Annual	Jun, 27. 2014
Two-Line V-Network	R&S	ENV216	100190	Jan. 02, 2014	Annual	Jan. 02, 2015
Anechoic Chamber	SY Corporation	L × W × H (9.6 m × 6.4 m × 6.4 m)	N/A	N.C.R.	N/A	N.C.R.

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▶ Support equipment

Description	Manufacturer	Model	Serial Number / FCC ID
N/A	-	-	-

1.6. Summary of test result

The EUT has been tested according to the following specifications:

APPLIED STANDARD:FCC Part15, RSS-210,RSS-Gen			
Section in FCC 15	**Section in RSS-210 RSS-Gen**	**Test Item**	**Result**
15.205(a) 15.209(a) 15.407(b)(1) 15.407(b)(2) 15.407(b)(3)	RSS-Gen 7 A9.2(1) A9.2(2) A9.2(3)	Transmitter radiated spurious emissions and Conducted spurious emission	Complied
15.407(a)(1) 15.407(a)(2)	A9.2(1) A9.2(2) A9.2(3)	Output power	Complied
15.407(a)(1) 15.407(a)(2)	A9.2(1) A9.2(2) A9.2(3)	Peak power spectral density	Complied
15.407(a)(6)	-	Peak excursion	Complied
15.207	RSS-Gen 7.2.4	Transmitter AC Power Line Conducted Emission	Complied

1.7. Test Procedure(s)

The measurement procedures described in the American National Standard for Methods of Measurement of Radio-Noise Emission from Low-Voltage Electrical and Electronic Equipment in the Range of 9 ㎑ to 40 ㎓ (ANSI C63.4-2003) and the guidance provided in KDB 789033_v01r03 were used in the measurement of the DUT.

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1.8. Sample calculation

Where relevant, the following sample calculation is provided:

1.8.1. Conducted test

offset value (dB) = Attenuator (dB) + Cable loss (dB)

1.8.2. Radiation test

Field strength level (dBμV/m) = Measured level (dBμV) + Antenna factor (dB) + Cable loss (dB) - amplifier (dB)

1.9. Test report revision

Revision	Report number	Description
0	F690501/RF-RTL007479	Initial

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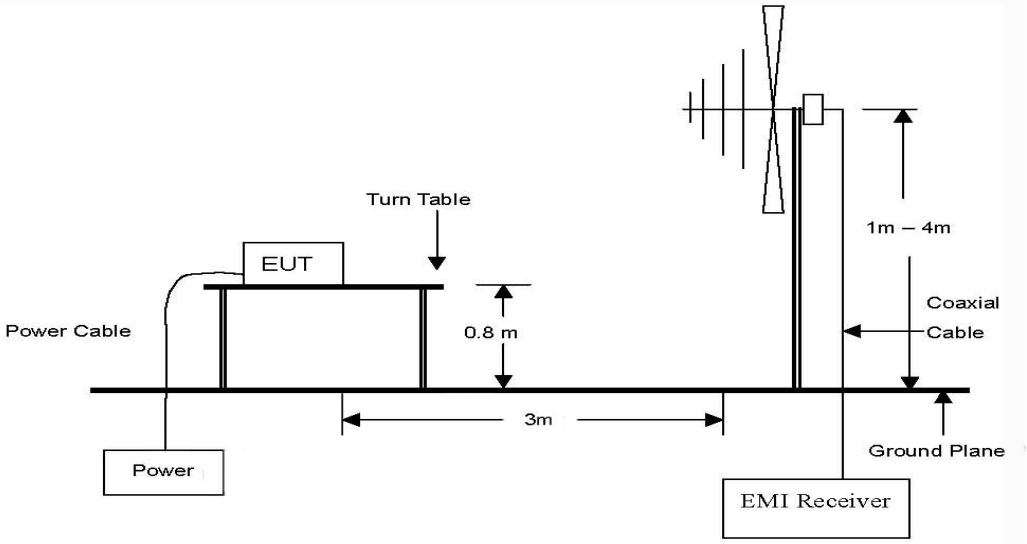
2. Transmitter radiated spurious emissions and conducted spurious emission

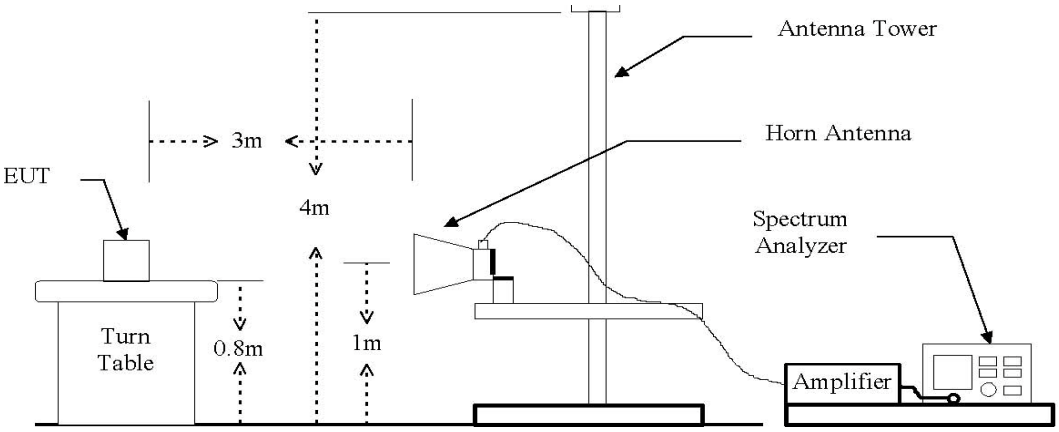
2.1. Test setup

2.1.1. Transmitter radiated spurious emissions

The diagram below shows the test setup that is utilized to make the measurements for emission from 30 ㎒ to 1 ㎓ Emissions.



The diagram below shows the test setup that is utilized to make the measurements for emission .The spurious emissions were investigated form 1 ㎓ to the 10th harmonic of the highest fundamental frequency or 40 ㎓, whichever is lower.



2.2. Limit

15.407(b)(1) For transmitters operating in the 5.15 ~ 5.25 ㎓ band: all emissions outside of the 5.15 ~ 5.35 ㎓ band shall not exceed an EIRP of -27 ㏈m/㎒.
15.407(b)(2) For transmitters operating in the 5.25 ~ 5.35 ㎓ band: all emissions outside of the 5.15 ~ 5.35 ㎓ band shall not exceed an EIRP of -27 ㏈m/㎒. Devices operating in the 5.25 ~ 5.35 ㎓ band that generate emissions in the 5.15 ~ 5.25 ㎓ band must meet all applicable technical requirements for operation in the 5.15 ~ 5.25 ㎓ band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 ㏈m/㎒ in the 5.15 ~ 5.25 ㎓ band.
15.407(b)(3) For transmitters operating in the 5.47 ~ 5.725 ㎓ band: all emissions outside of the 5.47 ~ 5.725 ㎓ band shall not exceed an EIRP of −27 ㏈m/㎒.

According to § 15.209(a), Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table：

Frequency (㎒)	Distance (Meters)	Field Strength (㏈㎶/m)	Field Strength (㎶/m)
30 - 88	3	40.0	100
88 – 216	3	43.5	150
216 – 960	3	46.0	200
Above 960	3	54.0	500

2.3. Test procedures

Conducted and Radiated emissions from the EUT were measured according to the dictates in section H of KDB 789033_v01r03.
All data rates and modes were investigated for conducted spurious emissions. The emissions of the configuration that produced the worst case emissions are reported in this section.

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2.3.1. Test procedures for radiated spurious emissions

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter anechoic chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
2. During performing radiated emission below 1 ㎓, the EUT was set 3 meters away from the interference receiving antenna, which was mounted on the top of a variable-height antenna tower. During performing radiated emission above 1 ㎓, the EUT was set 3 meter away from the interference-receiving antenna.
3. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10 ㏈ lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 ㏈ margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE;

- The measurements for below 1 ㎓
  Compliance shall be demonstrated using CISPR quasi-peak detection; however, peak detection is permitted as an alternative to quasi-peak detection.

- The measurements for above 1 ㎓
  Peak emission levels are measured by setting the analyzer as follows:
  Set to RBW = 1 ㎒, VBW ≥ 3 ㎒, Detector = Peak, Sweep time = auto, Trace mode= Max hold.
  Average emission levels are measured by setting the analyzer as follows:
  Set to RBW = 1 ㎒, VBW ≥ 3 ㎒, Detector = RMS, Averaging type = power(i.e., RMS), Sweep time = auto, Trace mode= trace average of at least 100 traces. If the transmission is not continuous, the number of traces shall be increased by a factor of 1/x, where x is the duty cycle.
  If duty cycle < 98 percent, a correction factor shell be added to the measurement results.
  - Power averaging(RMS) mode was used above, the correction factor is 10 log(1/x), where x is the duty cycle.

To get a maximum emission level from the EUT, the EUT is manipulated through three orthogonal planes.

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2.4. Test result

Ambient temperature : (24 ± 2) ℃
Relative humidity : 49 % R.H.

2.4.1. Spurious radiated emission (Worst case configuration_11a mode_6Mbps_Middle channel)

The frequency spectrum from 30 ㎒ to 1 000 ㎒ was investigated. Emission levels are not reported much lower than the limits by over 30 ㏈. All reading values are peak values.

Radiated emissions			Ant	Correction factors		Total	Limit	
Frequency (㎒)	Reading (㏈㎶)	Detect Mode	Pol.	AF (㏈/m)	Amp gain+CL (㏈)	Actual (㏈ uV/m)	Limit (㏈ uV/m)	Margin (㏈)
162.28	40.00	Peak	H	8.44	-25.64	22.80	43.50	20.70
243.68	46.46	Peak	H	13.59	-25.05	35.00	46.00	11.00
339.97	44.05	Peak	H	16.18	-24.83	35.40	46.00	10.60
500.01	36.03	Peak	H	18.73	-25.36	29.40	46.00	16.60
984.12	34.78	Peak	V	23.56	-23.34	35.00	54.00	19.00

Remark:

1. All spurious emission at channels are almost the same below 1 ㎓, So that the Middle channel was chose at representative in final test.
2. Actual = Reading + AF + AMP + CL

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2.4.2. Spurious radiated emission for above 1 ㎓

802.11a (Non-DFS) _6 Mbps

A. Low Channel (5 180 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (㏈ uV)	Detect Mode	Pol.	AF (㏈/m)	CL (㏈)	Duty factor (㏈)	Actual (㏈ uV/m)	Limit (㏈ uV/m)	Margin (㏈)
*5 150.00	13.71	Peak	H	33.43	9.32	-	56.46	74.00	17.54
*5 150.00	7.62	Average	H	33.43	9.32	0.04	50.41	54.00	3.59
Frequency (㎒)	**Reading (㏈ uV)**	**Detect Mode**	**Pol.**	**AF (㏈/m)**	**Amp Gain+CL (㏈)**	**Duty factor (㏈)**	**Actual (㏈ uV/m)**	**Limit (㏈ uV/m)**	**Margin (㏈)**
10 360.33	38.90	Peak	V	37.58	-24.50	-	51.98	68.23	16.25
Above 10 400.00	Not Detected	-	-	-	-	-	-	-	-

B. Middle Channel (5 220 ㎒)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (㎒)	Reading (㏈ uV)	Detect Mode	Pol.	AF (㏈/m)	Amp Gain+CL (㏈)	Actual (㏈ uV/m)	Limit (㏈ uV/m)	Margin (㏈)
10 440.60	35.74	Peak	V	37.67	-24.72	48.69	68.23	19.54
Above 10 500.00	Not Detected	-	-	-	-	-	-	-

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C. High Channel (5 240 ㎒)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
10 481.05	37.09	Peak	V	37.61	-24.85	49.85	68.23	18.38
Above 10 500.00	Not Detected	-	-	-	-	-	-	-

802.11a (DFS) _6 Mbps

A. Low Channel (5 260 ㎒)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
10 519.66	34.53	Peak	V	37.52	-24.93	47.12	68.23	21.11
Above 10 600.00	Not Detected	-	-	-	-	-	-	-

B. Middle Channel (5 300 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*10 600.03	37.29	Peak	V	37.63	-25.04	-	49.88	74.00	24.12
*10 600.03	24.61	Average	V	37.63	-25.04	0.04	37.24	54.00	16.76
Above 10 700.00	Not Detected	-	-	-	-	-	-	-	-

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C. High Channel (5 320 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*5 350.00	13.23	Peak	H	33.75	9.32	-	56.30	74.00	17.71
*5 350.00	6.32	Average	H	33.75	9.32	0.04	49.43	54.00	4.57
Frequency (㎒)	**Reading (dB uV)**	**Detect Mode**	**Pol.**	**AF (dB/m)**	**Amp Gain+CL (dB)**	**Duty factor (dB)**	**Actual (dB uV/m)**	**Limit (dB uV/m)**	**Margin (dB)**
*10 639.81	37.69	Peak	V	37.67	-24.73	-	50.63	68.23	17.60
*10 639.81	25.58	Average	V	37.67	-24.73	0.04	38.56	54.00	15.44
Above 10 700.00	Not Detected	-	-	-	-		-	-	-

802.11a (DFS) _6 Mbps

A. Low Channel (5 500 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*5 460.00	14.12	Peak	H	34.29	9.12	-	57.53	74.00	16.47
*5 460.00	6.99	Average	H	34.29	9.12	0.04	50.44	54.00	3.56
Frequency (㎒)	**Reading (dB uV)**	**Detect Mode**	**Pol.**	**AF (dB/m)**	**Amp Gain+CL (dB)**	**Duty factor (dB)**	**Actual (dB uV/m)**	**Limit (dB uV/m)**	**Margin (dB)**
*11 001.27	33.64	Peak	V	38.09	-24.29	-	47.44	74.00	26.56
*11 001.27	22.65	Average	V	38.09	-24.29	0.04	36.49	54.00	17.51
Above 11 100.00	Not Detected	-	-	-	-	-	-	-	-

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B. Middle Channel (5 580 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 161.16	37.31	Peak	V	37.94	-24.23	-	51.02	74.00	22.98
*11 161.16	27.03	Average	V	37.94	-24.23	0.04	40.78	54.00	13.22
Above 11 200.00	Not Detected	-	-	-	-		-	-	-

C. High Channel (5 700 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 401.88	35.13	Peak	V	37.93	-23.81	-	49.25	74.00	24.75
*11 401.88	23.83	Average	V	37.93	-23.81	0.04	37.99	54.00	16.01
Above 11 500.00	Not Detected	-	-	-	-	-	-	-	-

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802.11n_HT20 (Non-DFS)_MCS8

A. Low Channel (5 180 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*5 150.00	14.16	Peak	H	33.43	9.32	-	56.91	74.00	17.10
*5 150.00	7.51	Average	H	33.43	9.32	0.13	50.39	54.00	3.61

Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
10 361.08	37.65	Peak	V	37.58	-24.51	50.72	68.23	17.51
Above 10 400.00	Not Detected	-	-	-	-	-	-	-

B. Middle Channel (5 220 ㎒)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
10 441.63	34.52	Peak	V	37.67	-24.72	47.47	68.23	20.76
Above 10 500.00	Not Detected	-	-	-	-	-	-	-

C. High Channel (5 240 ㎒)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
10 481.55	36.68	Peak	V	37.61	-24.85	49.44	68.23	18.79
Above 10 500.00	Not Detected	-	-	-	-	-	-	-

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802.11n_HT20 (DFS)_MCS8

A. Low Channel (5 260 ㎒)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
10 520.35	33.83	Peak	V	37.52	-24.93	46.42	68.23	21.81
Above 10 600.00	Not Detected	-	-	-	-	-	-	-

B. Middle Channel (5 300 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*10 601.34	37.40	Peak	V	37.64	-25.03	-	50.01	74.00	23.99
*10 601.34	26.77	Average	V	37.64	-25.03	0.13	39.51	54.00	14.49
Above 10 700.00	Not Detected	-	-	-	-	-	-	-	-

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C. High Channel (5 320 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*5 350.00	15.06	Peak	H	33.75	9.32	-	58.13	74.00	15.88
*5 350.00	7.28	Average	H	33.75	9.32	0.13	50.48	54.00	3.52
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*10 641.45	36.54	Peak	V	37.67	-24.72	-	49.49	74.00	24.51
*10 641.45	25.22	Average	V	37.67	-24.72	0.13	38.30	54.00	15.70
Above 10 700.00	Not Detected	-	-	-	-	-	-	-	-

802.11n_HT20 (DFS)_MCS8

A. Low Channel (5 500 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*5 460.00	14.39	Peak	H	34.29	9.12	-	57.80	74.00	16.20
*5 460.00	6.53	Average	H	34.29	9.12	0.13	50.07	54.00	3.93
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 002.01	35.86	Peak	V	38.10	-24.29	-	49.67	74.00	24.33
*11 002.01	24.89	Average	V	38.10	-24.29	0.13	38.83	54.00	15.17
Above 11 100.00	Not Detected	-	-	-	-	-	-	-	-

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B. Middle Channel (5 580 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 159.62	35.99	Peak	V	37.94	-24.23	-	49.70	74.00	24.30
*11 159.62	25.27	Average	V	37.94	-24.23	0.13	39.11	54.00	14.89
Above 11 200.00	Not Detected	-	-	-	-	-	-	-	-

C. High Channel (5 700 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 400.21	42.80	Peak	V	37.92	-23.78	-	56.94	74.00	17.06
*11 400.21	28.04	Average	V	37.92	-23.78	0.13	42.31	54.00	11.69
Above 11 500.00	Not Detected	-	-	-	-	-	-	-	-

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802.11n_HT40 (Non-DFS) _MCS8

A. Low Channel (5 190 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*5 150.00	13.44	Peak	H	33.43	9.32	-	56.19	74.00	17.81
*5 150.00	7.38	Average	H	33.43	9.32	0.36	50.49	54.00	3.51

Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
10 380.07	36.00	Peak	V	37.54	-24.55	48.99	68.23	19.24
Above 10 400.00	Not Detected	-	-	-	-	-	-	-

B. High Channel (5 230 ㎒)

Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
10 461.18	35.05	Peak	V	37.62	-24.79	47.88	68.23	20.35
Above 10 500.00	Not Detected	-	-	-	-	-	-	-

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802. 11n_HT40 (DFS)_MCS8

A. Low Channel (5 270 ㎒)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
10 540.17	35.25	Peak	V	37.54	-24.96	47.83	68.23	20.40
Above 10 600.00	Not Detected	-	-	-	-	-	-	-

B. High Channel (5 310 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*5 350.00	12.64	Peak	H	33.75	9.32	-	55.71	74.00	18.29
*5 350.00	6.65	Average	H	33.75	9.32	0.36	50.08	54.00	3.92
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*10 620.24	37.65	Peak	V	37.71	-24.88	-	50.48	74.00	23.52
*10 620.24	25.27	Average	V	37.71	-24.88	0.36	38.46	54.00	15.54
Above 10 700.00	Not Detected	-	-	-	-	-	-	-	-

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802. 11n_HT40 (DFS)_MCS8

A. Low Channel (5 510 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*5 460.00	13.04	Peak	H	34.29	9.12	-	56.45	74.00	17.55
*5 460.00	7.22	Average	H	34.29	9.12	0.36	50.99	54.00	3.01
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 020.18	36.78	Peak	V	38.15	-24.26	-	50.67	74.00	23.33
*11 020.18	25.95	Average	V	38.15	-24.26	0.36	40.20	54.00	13.80
Above 11 100.00	Not Detected	-	-	-	-	-	-	-	-

B. Middle Channel (5 550 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 100.23	37.59	Peak	V	38.01	-24.12	-	51.48	74.00	22.52
*11 100.23	26.10	Average	V	38.01	-24.12	0.36	40.35	54.00	13.65
Above 11 200.00	Not Detected	-	-	-	-	-	-	-	-

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C. High Channel (5 670 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 340.19	36.10	Peak	V	38.11	-24.19	-	50.02	74.00	23.98
*11 340.19	26.83	Average	V	38.11	-24.19	0.36	41.11	54.00	12.89
Above 11 400.00	Not Detected	-	-	-	-	-	-	-	-

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802.11ac_VHT20 (Non-DFS)_MCS0

A. Low Channel (5 180 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*5 150.00	15.16	Peak	H	33.43	9.32	-	57.91	74.00	16.09
*5 150.00	7.59	Average	H	33.43	9.32	0.04	50.38	54.00	3.62

Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
10 360.12	38.18	Peak	V	37.58	-24.50	51.26	68.23	16.97
Above 10 400.00	Not Detected	-	-	-	-	-	-	-

B. Middle Channel (5 220 ㎒)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
10 440.21	34.50	Peak	V	37.67	-24.72	47.45	68.23	20.78
Above 10 500.00	Not Detected	-	-	-	-	-	-	-

C. High Channel (5 240 ㎒)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
10 479.93	35.75	Peak	V	37.61	-24.85	48.51	68.23	19.72
Above 10 500.00	Not Detected	-	-	-	-	-	-	-

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802.11ac_VHT20 (DFS)_MCS0

A. Low Channel (5 260 ㎒)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
10 520.14	34.22	Peak	V	37.52	-24.93	46.81	68.23	21.42
Above 10 600.00	Not Detected	-	-	-	-	-	-	-

B. Middle Channel (5 300 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*10 600.75	37.32	Peak	V	37.63	-25.03	-	49.92	74.00	24.08
*10 600.75	26.23	Average	V	37.63	-25.03	0.04	38.87	54.00	15.13
Above 10 700.00	Not Detected	-	-	-	-	-	-	-	-

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C. High Channel (5 320 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*5 350.00	13.66	Peak	H	33.75	9.32	-	56.73	74.00	17.27
*5 350.00	5.97	Average	H	33.75	9.32	0.04	49.08	54.00	4.92
Frequency (㎒)	**Reading (dB uV)**	**Detect Mode**	**Pol.**	**AF (dB/m)**	**Amp Gain+CL (dB)**	**Duty factor (dB)**	**Actual (dB uV/m)**	**Limit (dB uV/m)**	**Margin (dB)**
*10 640.29	36.41	Peak	V	37.67	-24.73	-	49.35	74.00	24.65
*10 640.29	24.56	Average	V	37.67	-24.73	0.04	37.54	54.00	16.46
Above 10 700.00	Not Detected	-	-	-	-	-	-	-	-

802.11ac_VHT20 (DFS)_MCS0

A. Low Channel (5 500 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*5 460.00	14.04	Peak	H	34.29	9.12	-	57.45	74.00	16.56
*5 460.00	6.85	Average	H	34.29	9.12	0.04	50.30	54.00	3.70
Frequency (㎒)	**Reading (dB uV)**	**Detect Mode**	**Pol.**	**AF (dB/m)**	**Amp Gain+CL (dB)**	**Duty factor (dB)**	**Actual (dB uV/m)**	**Limit (dB uV/m)**	**Margin (dB)**
*11 001.38	35.31	Peak	V	38.09	-24.29	-	49.11	74.00	24.89
*11 001.38	25.19	Average	V	38.09	-24.29	0.04	39.03	54.00	14.97
Above 11 100.00	Not Detected	-	-	-	-	-	-	-	-

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B. Middle 1 Channel (5 580 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 160.15	35.75	Peak	V	37.94	-24.23	-	49.46	74.00	24.54
*11 160.15	24.48	Average	V	37.94	-24.23	0.04	38.19	54.00	15.81
Above 11 200.00	Not Detected	-	-	-	-	-	-	-	-

C. Middle 2 Channel (5 700 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 400.37	35.06	Peak	V	37.92	-23.79		49.19	74.00	24.81
*11 400.37	27.85	Average	V	37.92	-23.79	0.04	41.98	54.00	12.02
Above 11 500.00	Not Detected	-	-	-	-	-	-	-	-

D. High Channel (5 720 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 441.56	34.98	Peak	V	38.07	-24.42	-	48.63	74.00	25.37
*11 441.56	28.32	Average	V	38.07	-24.42	0.04	41.97	54.00	12.03
Above 11 500.00	Not Detected	-	-	-	-	-	-	-	-

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802.11ac_VHT40 (Non-DFS) _MCS0

A. Low Channel (5 190 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*5 150.00	16.55	Peak	H	33.43	9.32	-	59.30	74.00	14.70
*5 150.00	8.07	Average	H	33.43	9.32	0.18	51.00	54.00	3.00
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)		Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
10 380.07	37.07	Peak	V	37.54	-24.55		50.06	68.23	18.17
Above 10 400.00	Not Detected	-	-	-	-		-	-	-

B. High Channel (5 230 ㎒)

Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
10 461.39	34.04	Peak	V	37.62	-24.79	46.87	68.23	21.36
Above 10 500.00	Not Detected	-	-	-	-	-	-	-

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802. 11ac_VHT40 (DFS)_MCS0

A. Low Channel (5 270 ㎒)

Radiated Emissions			Ant	Correction Factors		Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
10 539.78	34.46	Peak	V	37.54	-24.96	47.04	68.23	21.19
Above 10 600.00	Not Detected	-	-	-	-	-	-	-

B. High Channel (5 310 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*5 350.00	13.78	Peak	H	33.75	9.32	-	56.85	74.00	17.15
*5 350.00	6.85	Average	H	33.75	9.32	0.18	50.10	54.00	3.90
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*10 620.35	38.35	Peak	V	37.71	-24.88		51.18	74.00	22.82
*10 620.35	25.13	Average	V	37.71	-24.88	0.18	38.14	54.00	15.86
Above 10 700.00	Not Detected	-	-	-	-	-	-	-	-

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802. 11n_HT40 (DFS)_MCS0

A. Low Channel (5 510 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*5 460.00	15.38	Peak	H	34.29	9.12		58.79	74.00	15.21
*5 460.00	7.38	Average	H	34.29	9.12	0.18	50.97	54.00	3.03
Frequency (㎒)	**Reading (dB uV)**	**Detect Mode**	**Pol.**	**AF (dB/m)**	**Amp Gain+CL (dB)**	**Duty factor (dB)**	**Actual (dB uV/m)**	**Limit (dB uV/m)**	**Margin (dB)**
*11 020.56	38.14	Peak	V	38.15	-24.26		52.03	74.00	21.97
*11 020.56	26.37	Average	V	38.15	-24.26	0.18	40.44	54.00	13.56
Above 11 100.00	Not Detected	-	-	-	-	-	-	-	-

B. Middle 1 Channel (5 550 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 101.24	36.20	Peak	V	38.01	-24.12	-	50.09	74.00	23.91
*11 101.24	26.58	Average	V	38.01	-24.12	0.18	40.65	54.00	13.35
Above 11 200.00	Not Detected	-	-	-	-	-	-	-	-

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C. Middle 2 Channel (5 670 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 340.23	36.20	Peak	V	38.11	-24.19	-	50.12	74.00	23.88
*11 340.23	26.58	Average	V	38.11	-24.19	0.18	40.68	54.00	13.32
Above 11 400.00	Not Detected	-	-	-	-	-	-	-	-

D. High Channel (5 710 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*11 420.25	36.20	Peak	V	38.05	-24.09	-	50.16	74.00	23.84
*11 420.25	26.58	Average	V	38.05	-24.09	0.18	40.72	54.00	13.28
Above 11 400.00	Not Detected	-	-	-	-	-	-	-	-

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802.11ac_VHT80 (Non-DFS) _MCS0

A. Low Channel (5 210 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*5 150.00	18.87	Peak	V	33.43	9.32		61.62	74.00	12.38
*5 150.00	7.21	Average	V	33.43	9.32	0.36	50.32	54.00	3.68

Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
10 420.23	35.38	Peak	V	37.64	-24.66	48.36	68.23	19.87
Above 10 500.00	Not Detected	-	-	-	-	-	-	-

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802. 11ac_VHT80 (DFS)_MCS0

A. Low Channel (5 290 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty factor (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
*5 350.00	15.24	Peak	H	33.75	9.32	-	58.31	74.00	15.69
*5 350.00	7.52	Average	H	33.75	9.32	0.36	50.95	54.00	3.05

Frequency (㎒)	Reading (dB uV)	Detect Mode	Pol.	AF (dB/m)	Amp Gain+CL (dB)	Actual (dB uV/m)	Limit (dB uV/m)	Margin (dB)
10 580.33	35.50	Peak	V	37.63	-25.02	48.11	68.23	20.12
Above 10 600.00	Not Detected	-	-	-	-	-	-	-

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802. 11ac_VHT80 (DFS)_MCS0

A. Low Channel (5 530 ㎒)

Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (㏈ uV)	Detect Mode	Pol.	AF (㏈/m)	CL (㏈)	Duty factor (㏈)	Actual (㏈ uV/m)	Limit (㏈ uV/m)	Margin (㏈)
*5 460.00	13.13	Peak	H	34.29	9.12	-	56.54	74.00	17.46
*5 460.00	7.20	Average	H	34.29	9.12	0.36	50.97	54.00	3.03
Frequency (㎒)	**Reading (㏈ uV)**	**Detect Mode**	**Pol.**	**AF (㏈/m)**	**Amp Gain+CL (㏈)**	**Duty factor (㏈)**	**Actual (㏈ uV/m)**	**Limit (㏈ uV/m)**	**Margin (㏈)**
*11 061.20	34.23	Peak	V	38.06	-24.19	-	48.10	68.23	20.13
*11 061.20	25.25	Average	V	38.06	-24.19	0.36	39.48	54.00	14.52
Above 11 100.00	Not Detected	-	-	-	-	-	-	-	-

B. High Channel (5 690 ㎒)

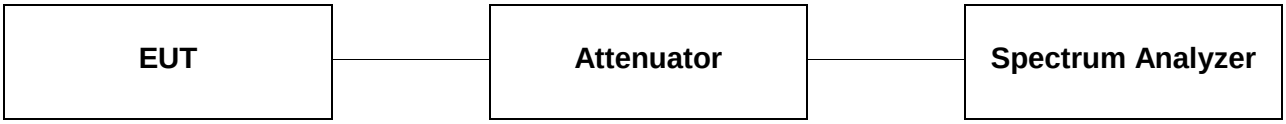
Radiated Emissions			Ant	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (㏈ uV)	Detect Mode	Pol.	AF (㏈/m)	Amp Gain+CL (㏈)	Duty factor (㏈)	Actual (㏈ uV/m)	Limit (㏈ uV/m)	Margin (㏈)
*11 380.14	34.64	Peak	V	38.00	-23.92	-	48.72	74.00	25.28
*11 380.14	24.27	Average	V	38.00	-23.92	0.36	38.71	54.00	15.29
Above 11 400.00	Not Detected	-	-	-	-	-	-	-	-

Remark:

1. "*" means the restricted band.
2. Radiated emissions measured in frequency above 1 000 ㎒ were made with an instrument using Peak / average detector mode if frequency was in restricted band. Otherwise the frequency was in outside of restricted band, only peak detector should be used.
3. Average test would be performed if the peak result was greater than the average limit and frequency was in the restricted band.
4. If frequency was outside of restricted band, the calculation method for peak limit is same as below:
   68.23 ㏈㎶/m = EIRP – 20 log(d) + 104.77 = -27 – 20 log (3) + 104.77
   *distance: 3 m, *EIRP: -27 ㏈ m/㎒

3. 26 dB bandwidth and 99 % occupied bandwidth

3.1. Test setup



3.2. Limit

None; for reporting purpose only

3.3. Test procedure

All data rates and modes were investigated for this test. The full data for the worst case data rate are reported in this section.

3.3.1. 26 dB Bandwidth

1. This measurement settings are specified in section C of KDB 789033_v01r03.
2. Set RBW: approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak
5. Trace mode = max hold.
6. 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 %

Note: The automatic bandwidth measurement capability of a spectrum analyzer may be employed if it implements the functionality described above.

3.3.2. 99% bandwidth

1. Set the spectrum analyzer as SPAN = 2 or 3 times necessary bandwidth, RBW = approximately 1 % of the SPAN, VBW is set to 3 times RBW, Detector = Sample, Trace mode = max hold.
2. Measure lowest and highest frequencies are placed in a running sum until 0.5 % and 99.5 % of the total is reached.
3. Record the SPAN between the lowest and the highest frequencies for the 99 % occupied bandwidth.
4. Repeat until all the test channels are investigated.

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3.4. Test result

Ambient temperature : (24 ± 2) ℃
Relative humidity : 49 % R.H.

ANT0

802. 11a

Operating mode	Frequency(㎒)	26 ㏈ bandwidth(㎒)	99% bandwidth(㎒)
Non - DFS	5 180	28.98	16.50
	5 220	29.08	16.59
	5 240	28.45	16.63
DFS	5 260	28.91	16.65
	5 300	28.96	16.61
	5 320	28.59	16.50
DFS	5 500	27.85	16.51
	5 580	28.81	16.51
	5 700	28.74	16.50

802.11n_HT20

Operating mode	Frequency(㎒)	26 ㏈ bandwidth(㎒)	99% bandwidth(㎒)
Non - DFS	5 180	27.42	17.68
	5 220	26.02	17.64
	5 240	27.86	17.65
DFS	5 260	27.13	17.65
	5 300	21.09	17.63
	5 320	21.42	17.63
DFS	5 500	20.11	17.60
	5 580	19.83	17.60
	5 700	19.95	17.60

802.11n_HT40

Operating mode	Frequency(㎒)	26 ㏈ bandwidth(㎒)	99% bandwidth(㎒)
Non - DFS	5 190	58.66	36.13
	5 230	54.72	36.10
DFS	5 270	55.76	36.12
	5 310	53.13	36.13
	5 510	52.90	36.01
	5 550	54.86	36.04
	5 670	46.67	35.99

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802.11ac_VHT20

Operating mode	Frequency(㎒)	26 ㏈ bandwidth(㎒)	99% bandwidth(㎒)
Non - DFS	5 180	19.96	17.56
	5 220	19.95	17.57
	5 240	20.04	17.58
DFS	5 260	19.80	17.58
	5 300	19.95	17.57
	5 320	19.96	17.57
DFS	5 500	19.86	17.57
	5 580	19.89	17.58
	5 700	19.98	17.57
	5 720	19.87	17.58

802.11ac_VHT40

Operating mode	Frequency(㎒)	26 ㏈ bandwidth(㎒)	99% bandwidth(㎒)
Non - DFS	5 190	39.73	36.02
	5 230	40.29	36.02
DFS	5 270	40.28	36.05
	5 310	39.92	36.08
	5 510	40.09	36.00
	5 550	40.33	36.02
	5 670	39.90	35.98
	5 710	40.01	35.97

802.11ac_VHT80

Operating mode	Frequency(㎒)	26 ㏈ bandwidth(㎒)	99% bandwidth(㎒)
Non - DFS	5 210	80.96	75.77
DFS	5 290	81.15	75.81
	5 530	81.19	75.79
	5 610	81.24	75.78
	5 690	82.32	75.77

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ANT1

802. 11a

Operating mode	Frequency(㎒)	26 ㏈ bandwidth(㎒)	99% bandwidth(㎒)
Non - DFS	5 180	28.16	16.58
	5 220	29.10	16.72
	5 240	29.64	16.66
DFS	5 260	30.94	16.81
	5 300	33.14	16.74
	5 320	33.38	16.71
DFS	5 500	28.78	16.47
	5 580	25.61	16.46
	5 700	19.91	16.46

802.11n_HT20

Operating mode	Frequency(㎒)	26 ㏈ bandwidth(㎒)	99% bandwidth(㎒)
Non - DFS	5 180	19.74	17.59
	5 220	20.01	17.62
	5 240	19.67	17.68
DFS	5 260	21.39	17.69
	5 300	22.99	17.61
	5 320	23.07	17.64
DFS	5 500	19.75	17.58
	5 580	19.93	17.60
	5 700	20.10	17.58

802.11n_HT40

Operating mode	Frequency(㎒)	26 ㏈ bandwidth(㎒)	99% bandwidth(㎒)
Non - DFS	5 190	39.83	35.96
	5 230	39.66	35.99
DFS	5 270	55.40	36.00
	5 310	46.82	36.07
	5 510	39.73	36.02
	5 550	39.85	36.00
	5 670	39.98	35.96

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802.11ac_VHT20

Operating mode	Frequency(㎒)	26 ㏈ bandwidth(㎒)	99% bandwidth(㎒)
Non - DFS	5 180	19.76	17.57
	5 220	19.71	17.59
	5 240	19.68	17.57
DFS	5 260	19.73	17.58
	5 300	19.84	17.57
	5 320	19.84	17.59
DFS	5 500	19.72	17.58
	5 580	19.63	17.58
	5 700	19.75	17.58
	5 720	19.78	17.57

802.11ac_VHT40

Operating mode	Frequency(㎒)	26 ㏈ bandwidth(㎒)	99% bandwidth(㎒)
Non - DFS	5 190	39.40	35.99
	5 230	39.84	35.99
DFS	5 270	40.62	36.02
	5 310	39.95	36.00
	5 510	40.20	36.00
	5 550	39.52	36.01
	5 670	40.02	35.96
	5 710	40.27	36.02

802.11ac_VHT80

Operating mode	Frequency(㎒)	26 ㏈ bandwidth(㎒)	99% bandwidth(㎒)
Non - DFS	5 210	81.34	75.81
DFS	5 290	81.10	75.84
	5 530	81.22	75.78
	5 610	80.95	75.76
	5 690	80.96	75.77

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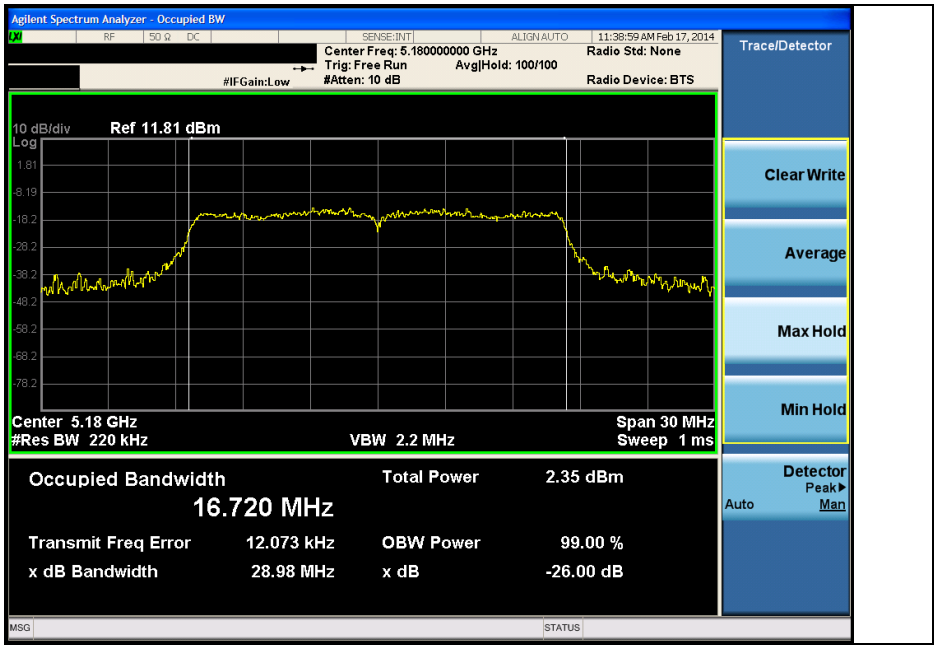
26 dB Bandwidth

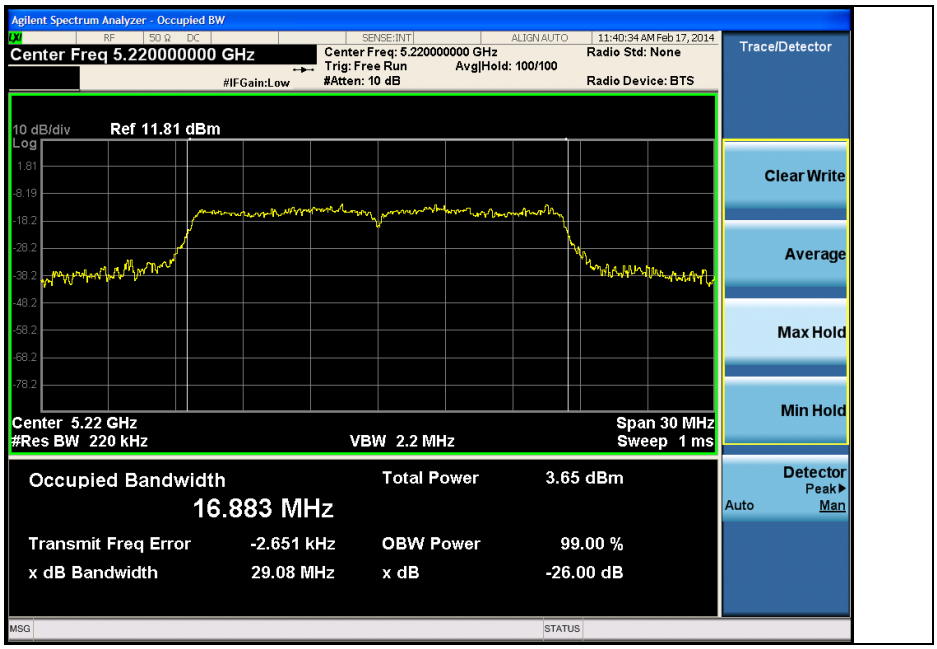
ANT0

802.11a (Non-DFS)

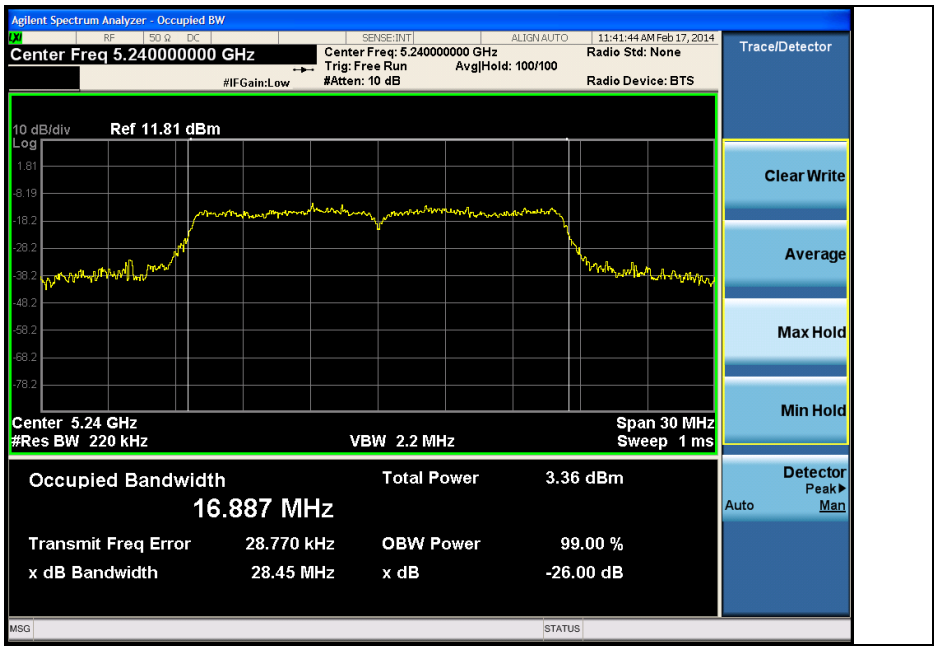
Low Channel (5 180 ㎒)



Middle Channel (5 220 ㎒)

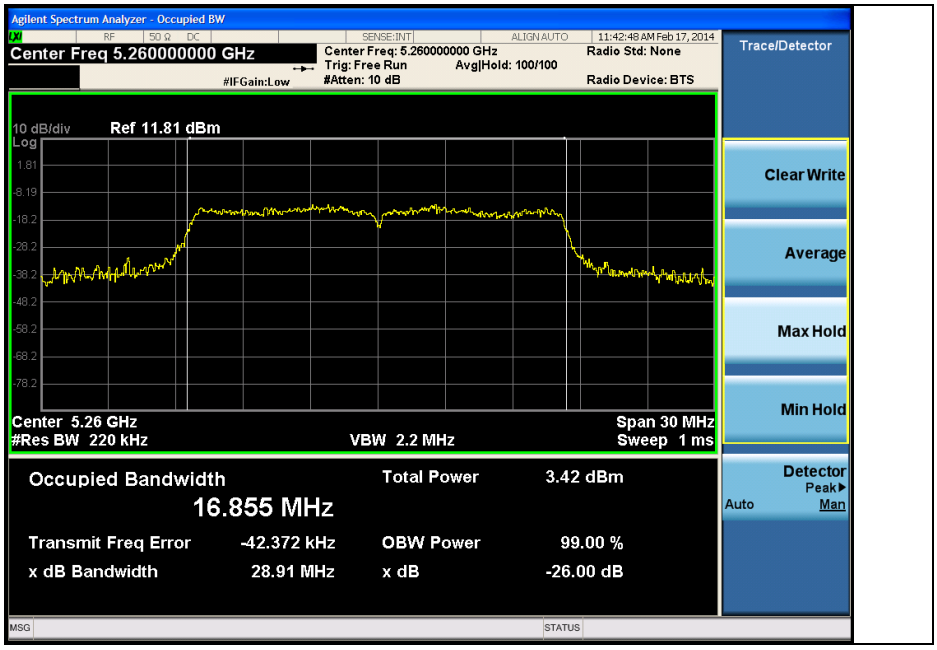


High Channel (5 240 ㎒)

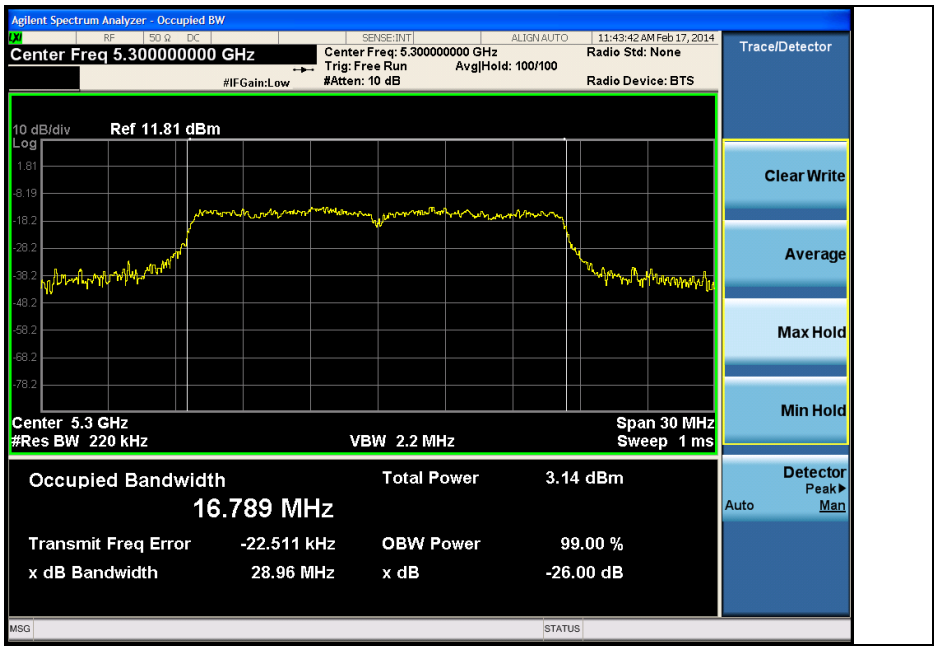


802.11a (DFS)

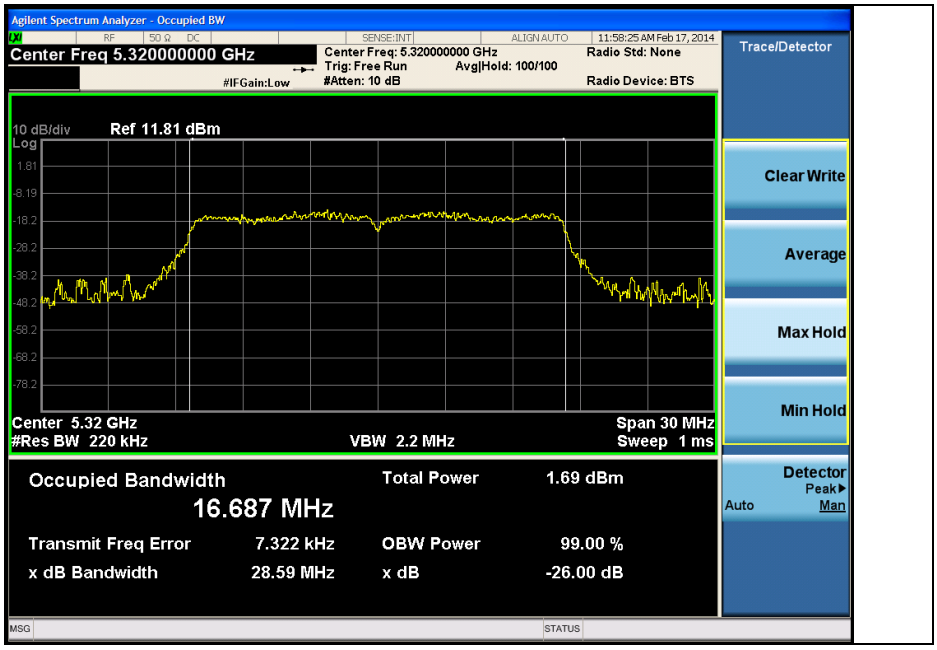
Low Channel (5 260 ㎒)



Middle Channel (5 300 ㎒)

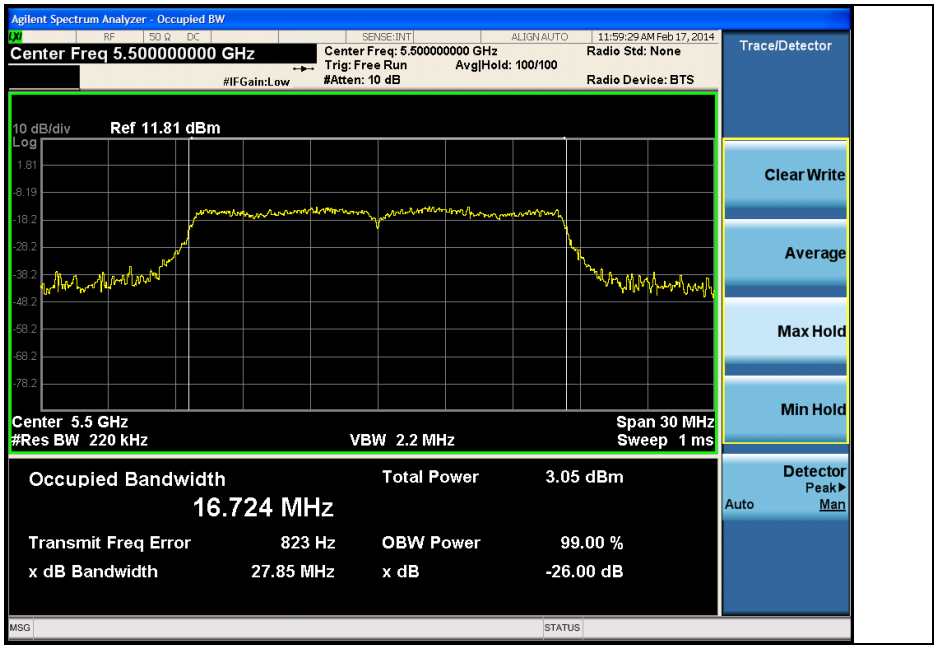


High Channel (5 320 ㎒)

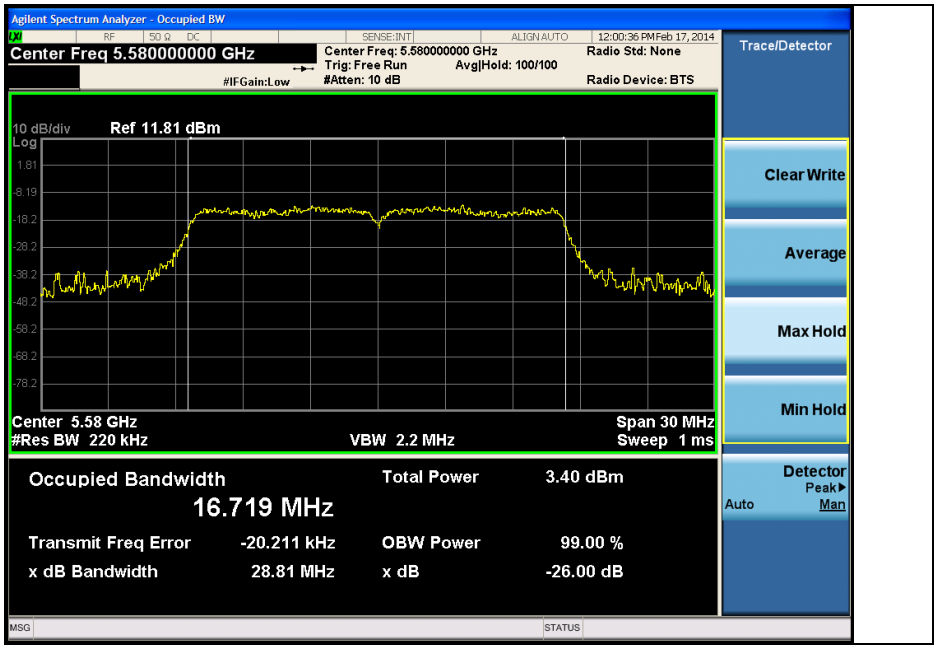


802.11a (DFS)

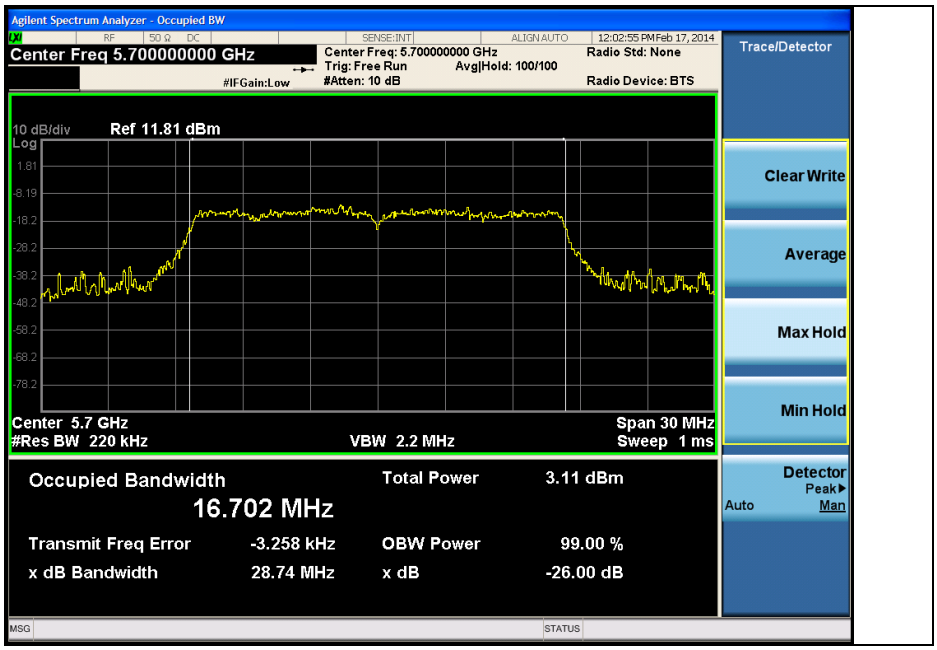
Low Channel (5 500 ㎒)



Middle Channel (5 580 ㎒)

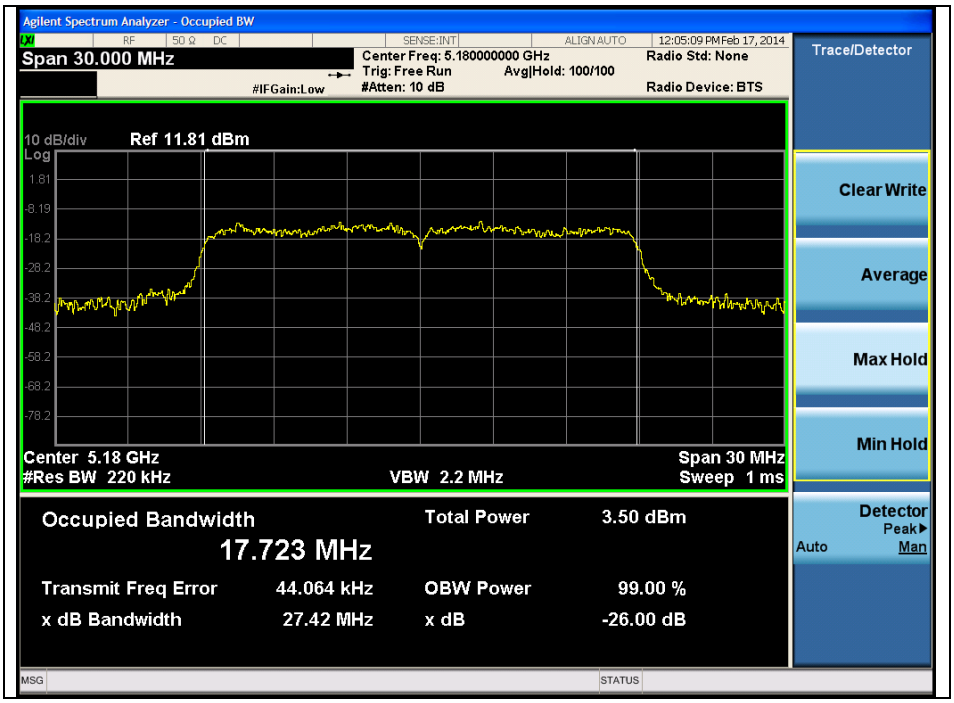


High Channel (5 700 ㎒)

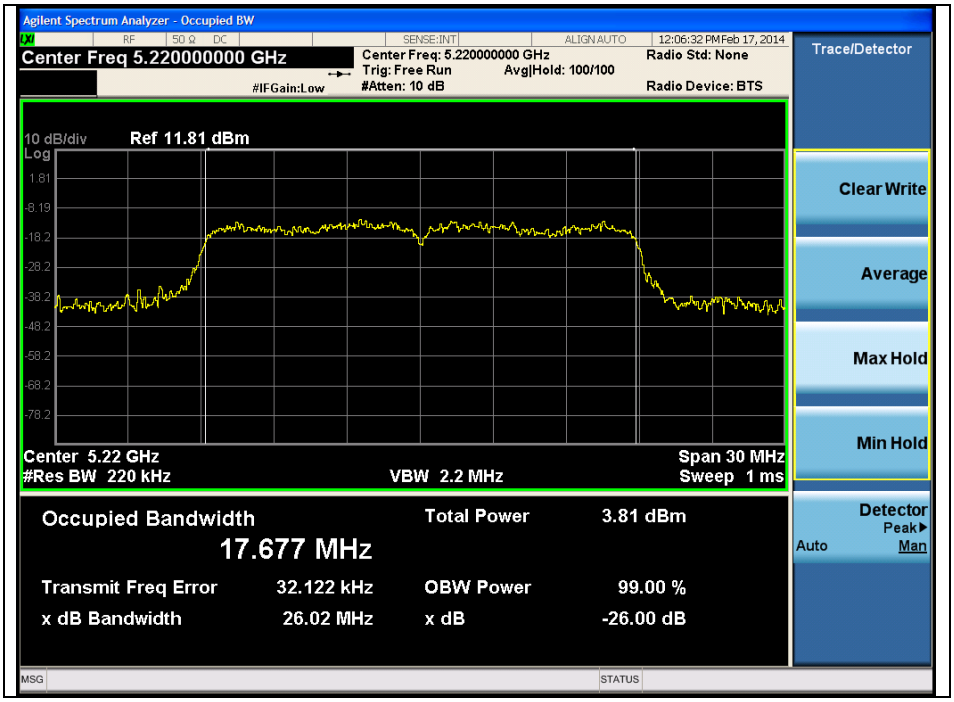


802.11n_HT20 (Non-DFS)

Low Channel (5 180 ㎒)



Middle Channel (5 220 ㎒)



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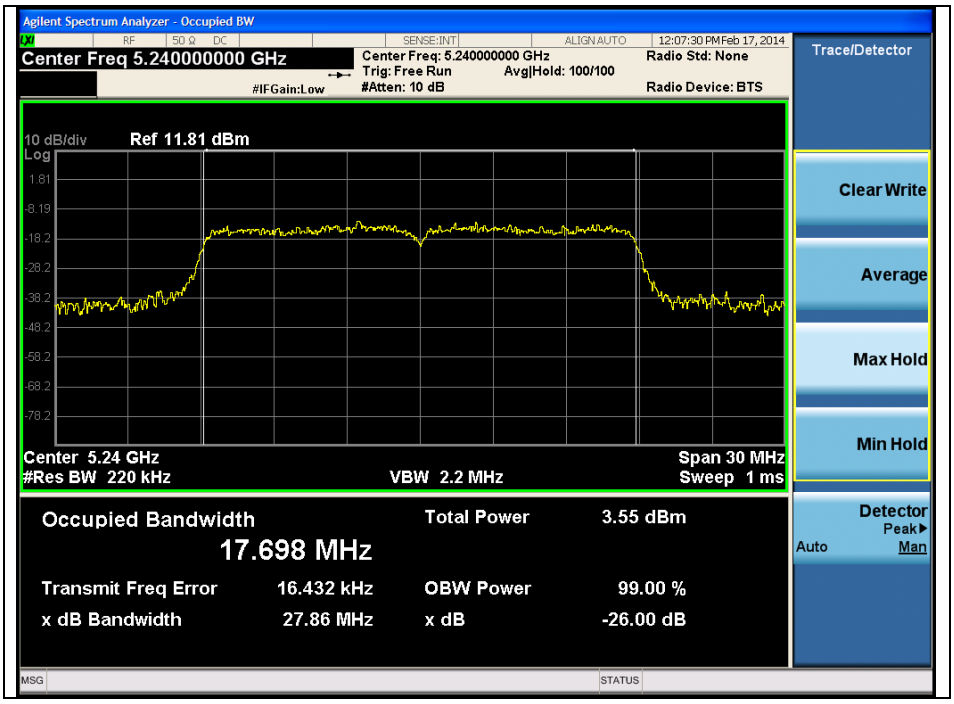
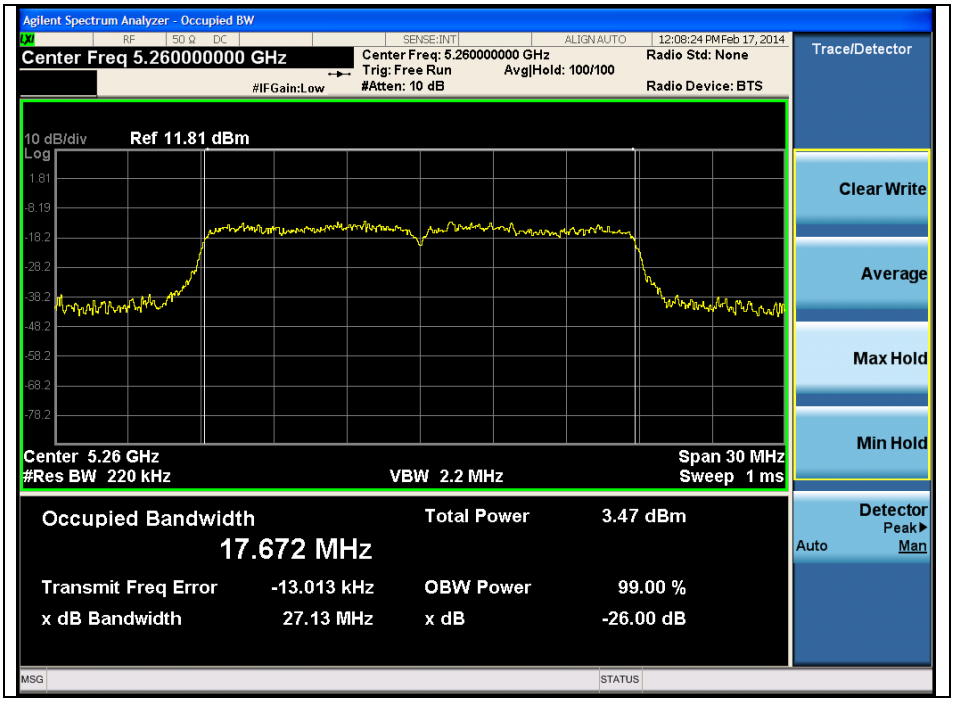
High Channel (5 240 ㎒)

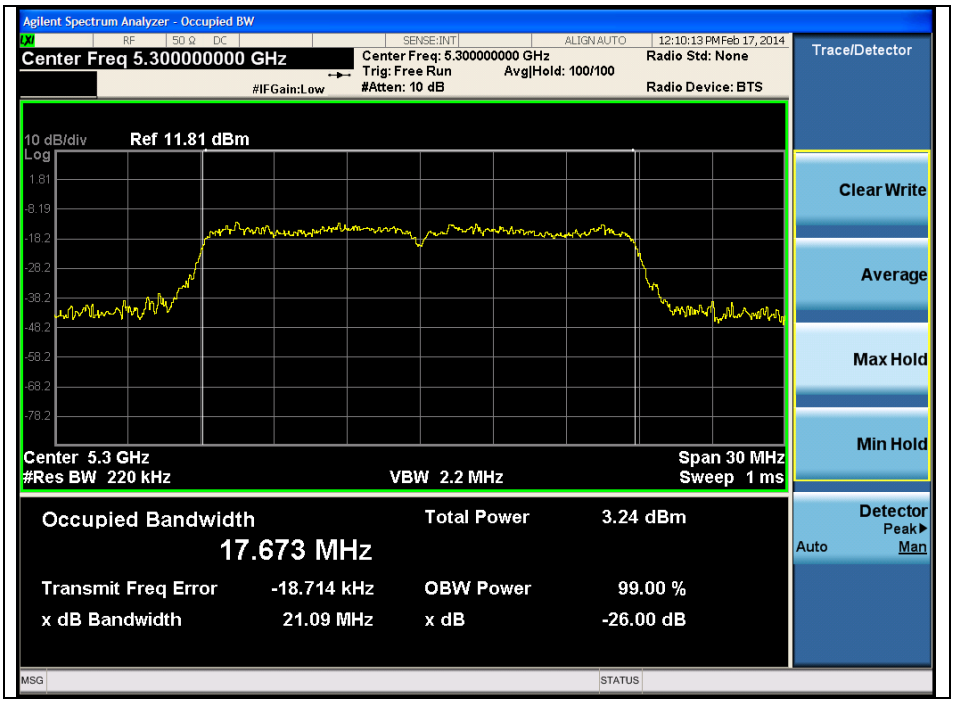


802.11n_HT20 (DFS)

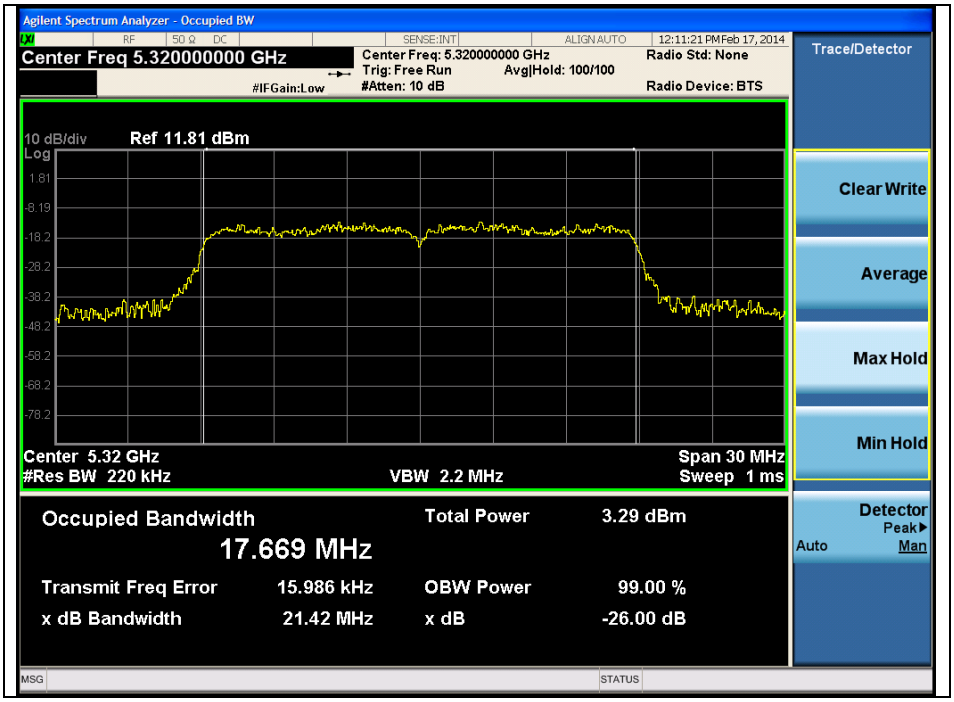
Low Channel (5 260 ㎒)



Middle Channel (5 300 ㎒)

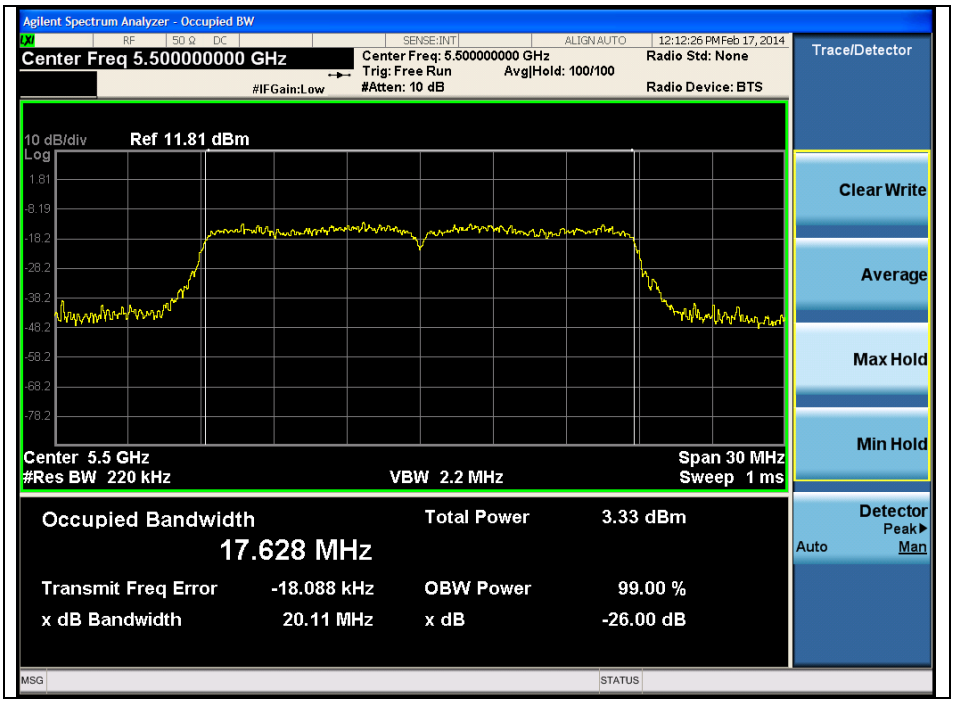


High Channel (5 320 ㎒)

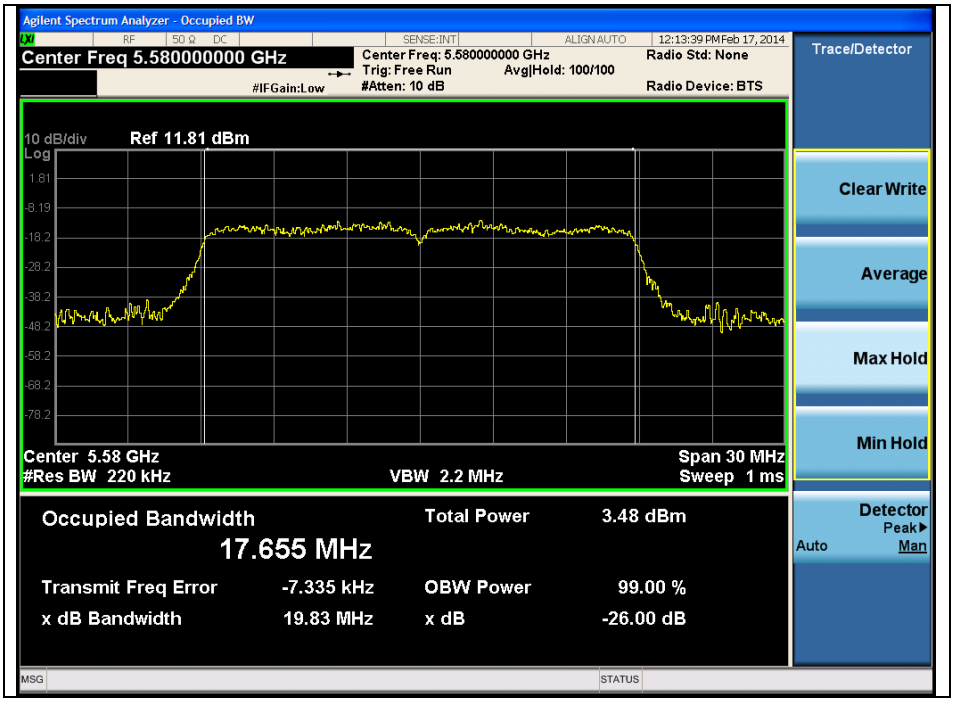


802.11n_HT20 (DFS)

Low Channel (5 500 ㎒)



Middle Channel (5 580 ㎒)



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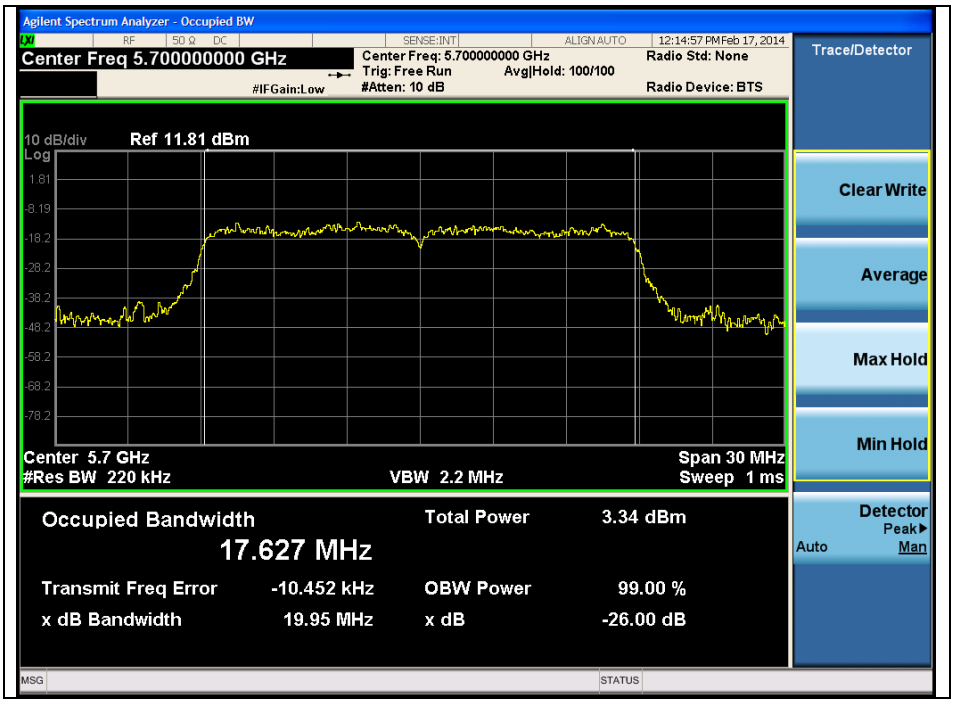
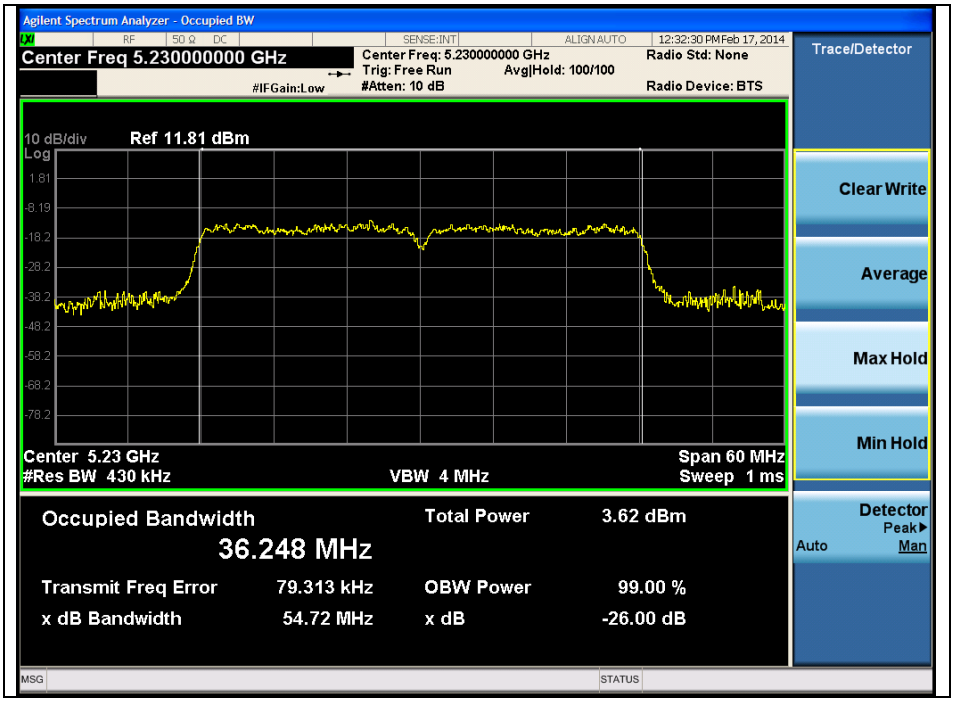
High Channel (5 700 ㎒)



802.11n_HT40 (Non-DFS)

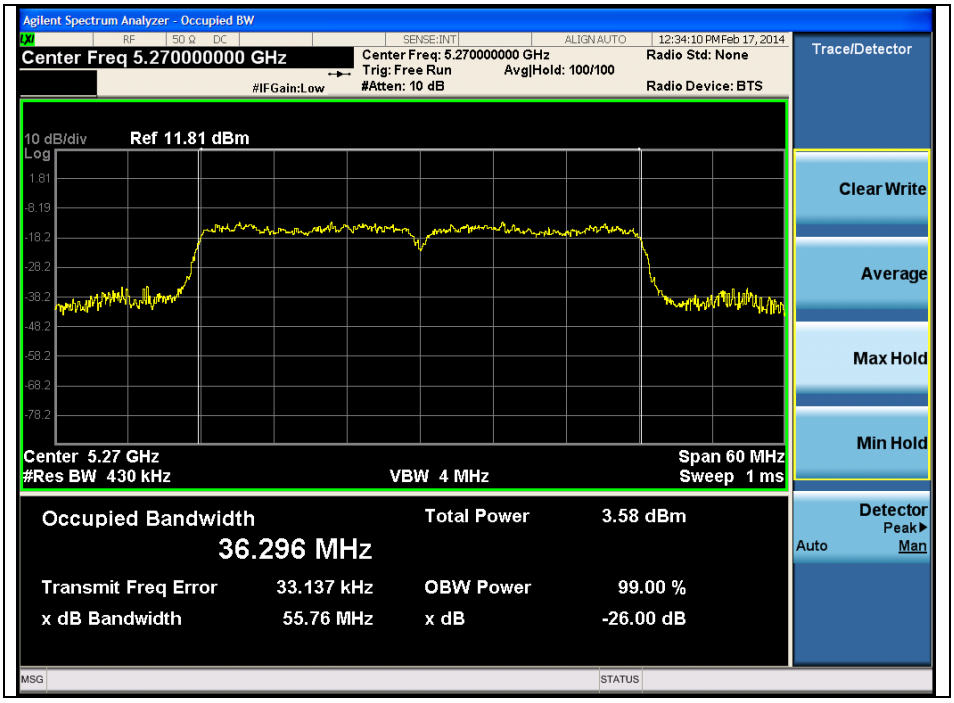
Low Channel (5 190 ㎒)

High Channel (5 230 ㎒)

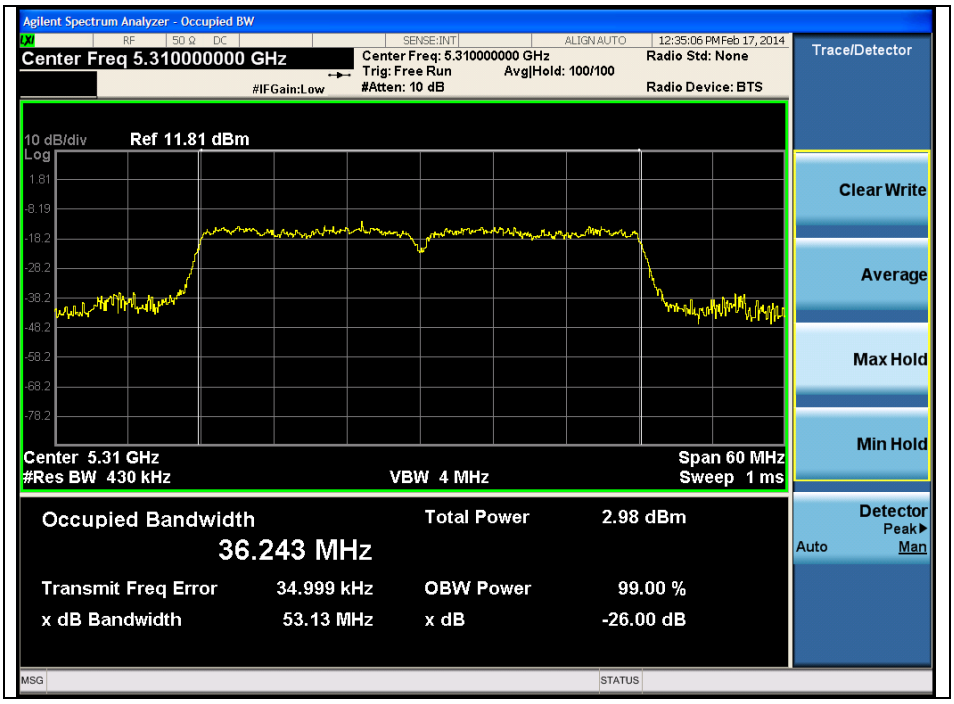


802.11n_HT40 (DFS)

Low Channel (5 270 ㎒)



High Channel (5 310 ㎒)



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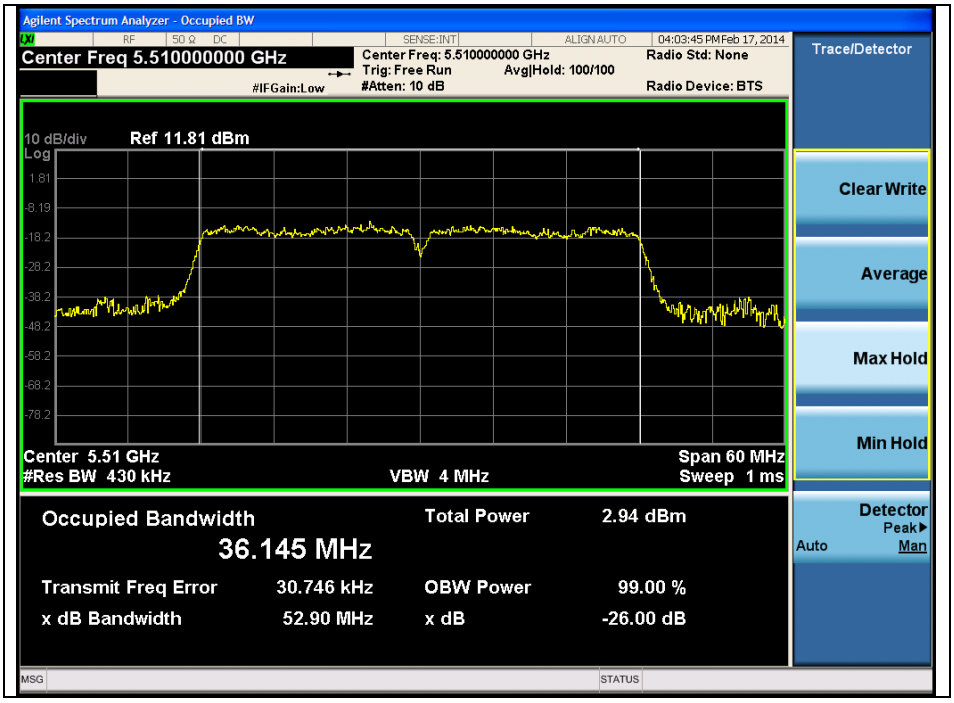
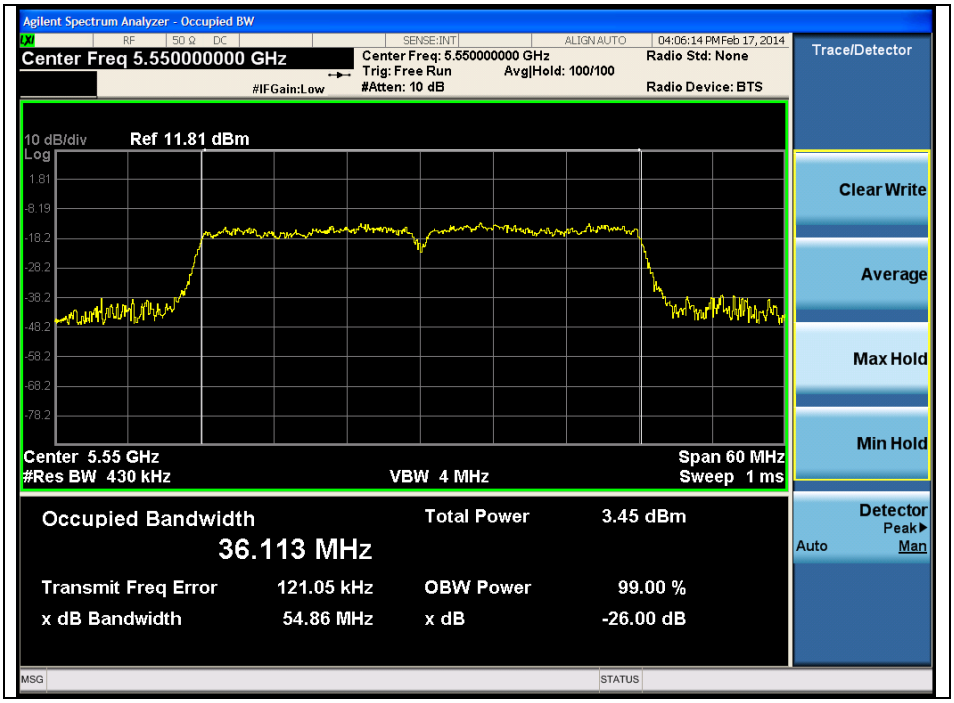
802.11n_HT40 (DFS)

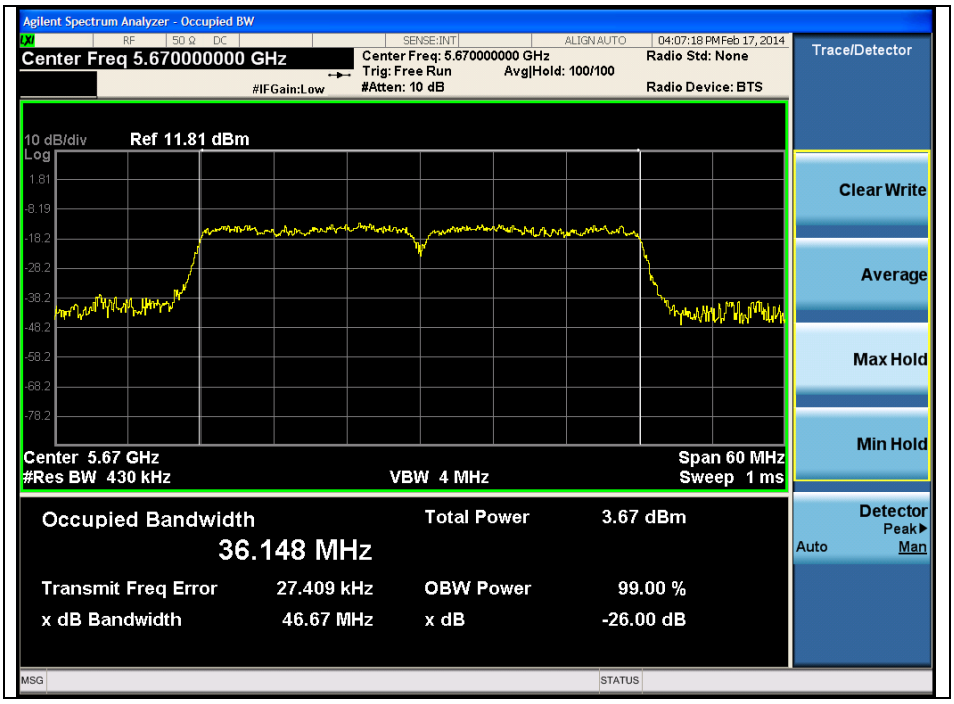
Low Channel (5 510 ㎒)



Low Channel (5 550 ㎒)



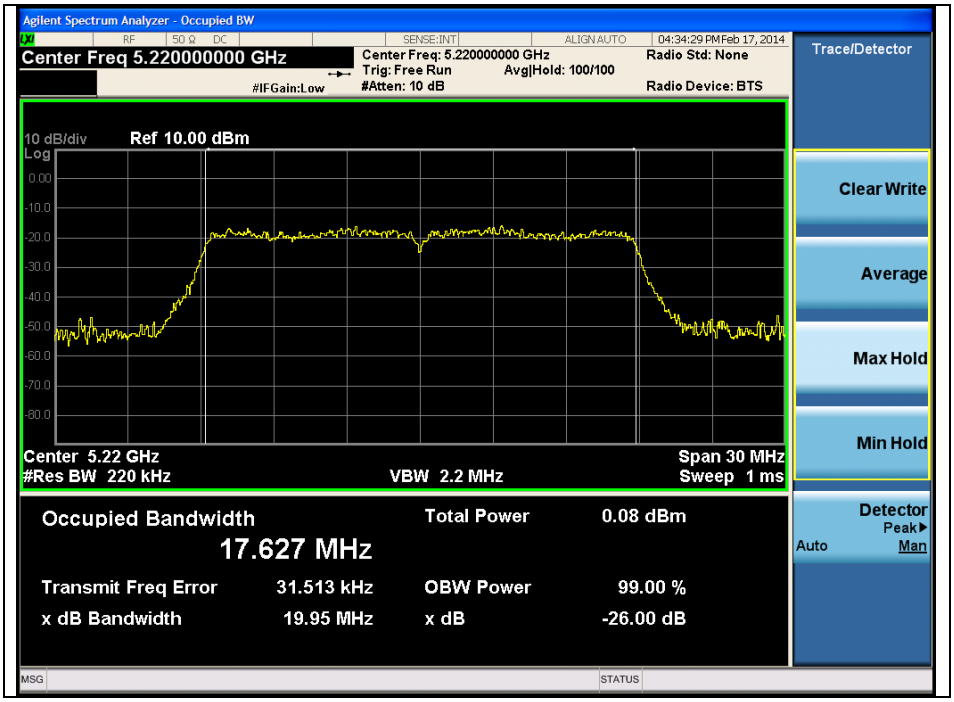
High Channel (5 670 ㎒)



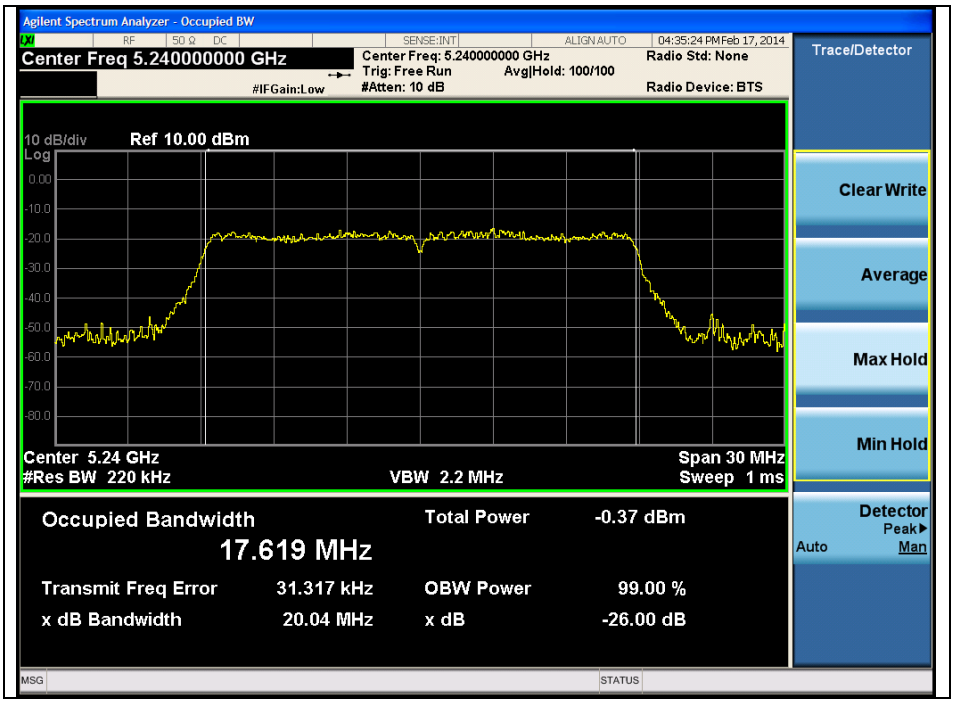
802.11ac_VHT20 (Non-DFS)

Low Channel (5 180 ㎒)

Middle Channel (5 220 ㎒)

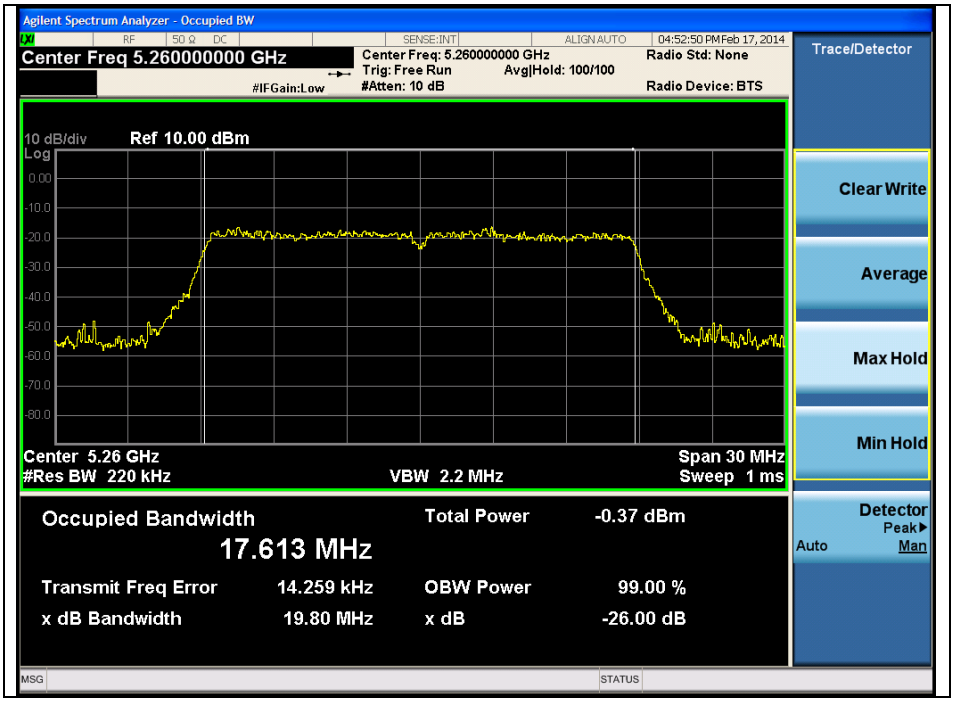


High Channel (5 240 ㎒)

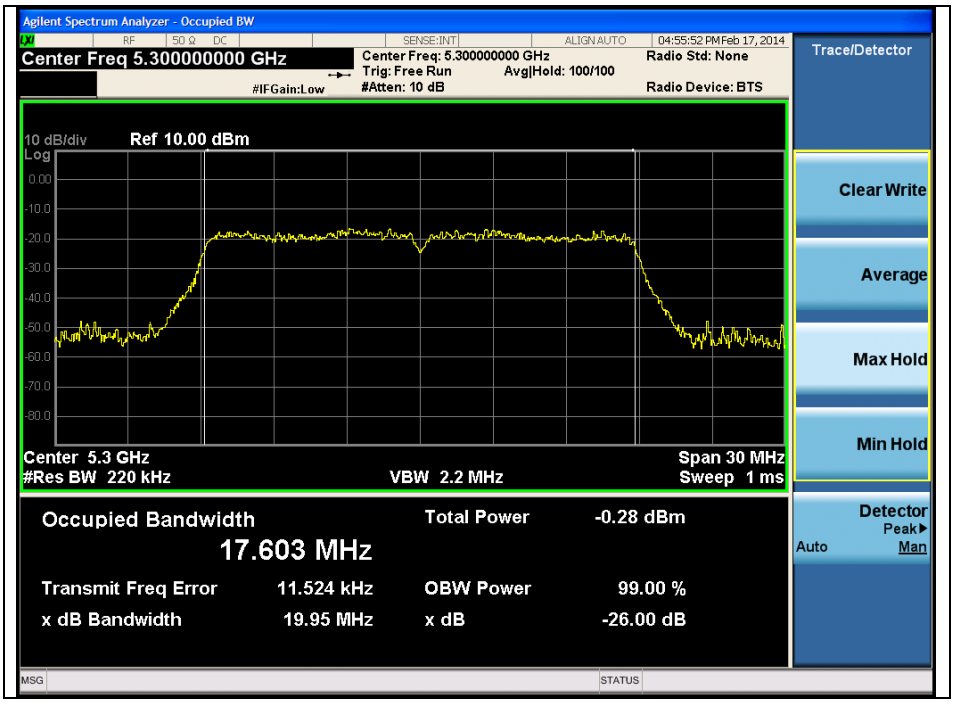


802.11ac_VHT20 (DFS)

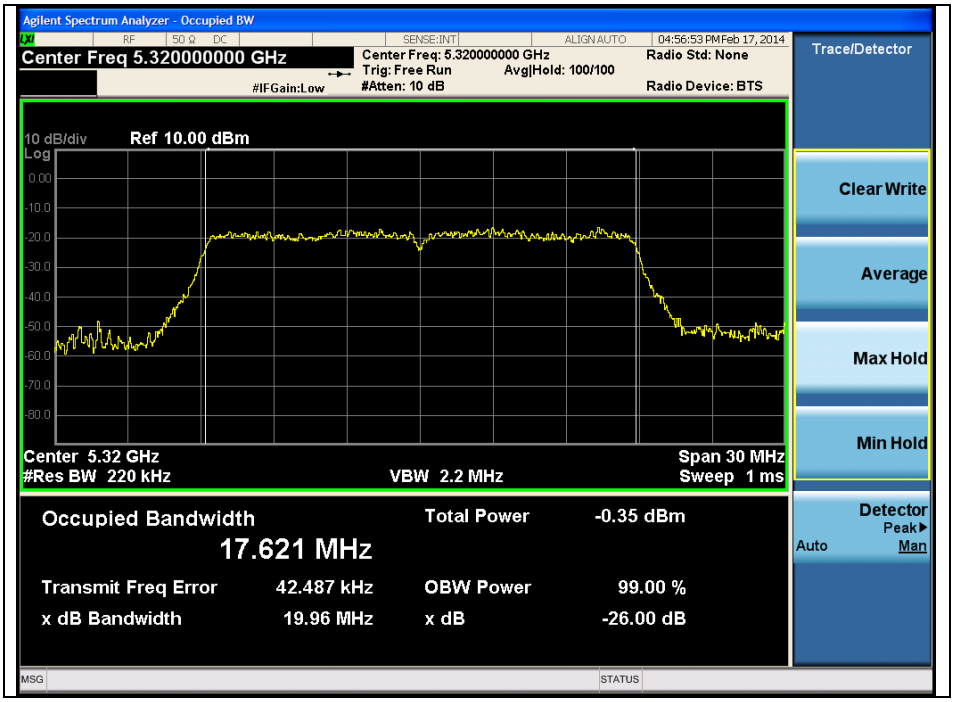
Low Channel (5 260 ㎒)



Middle Channel (5 300 ㎒)

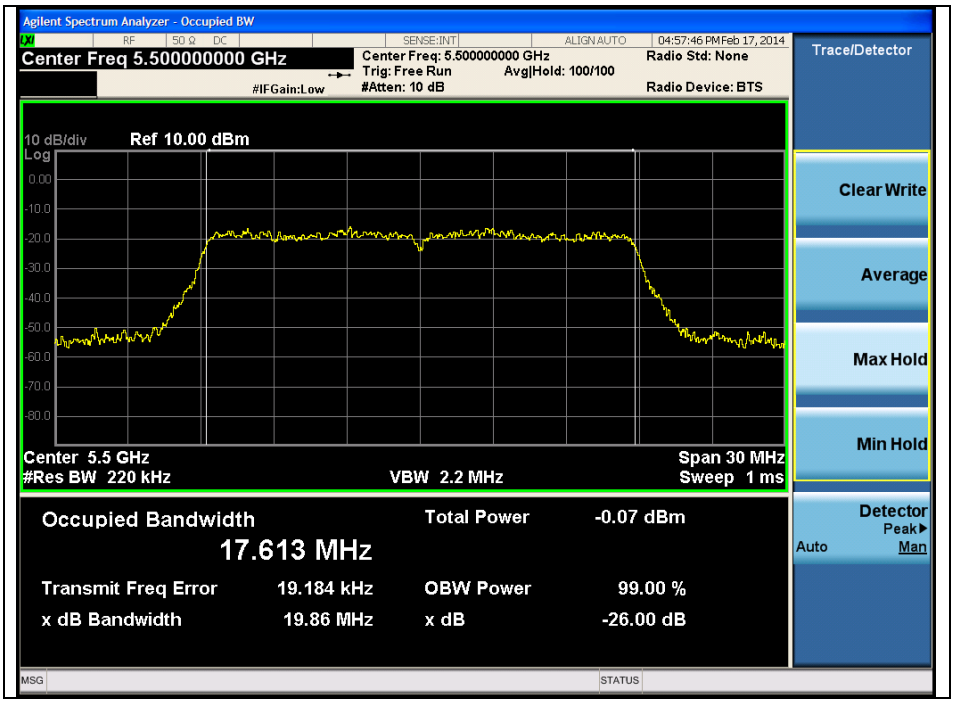


High Channel (5 320 ㎒)

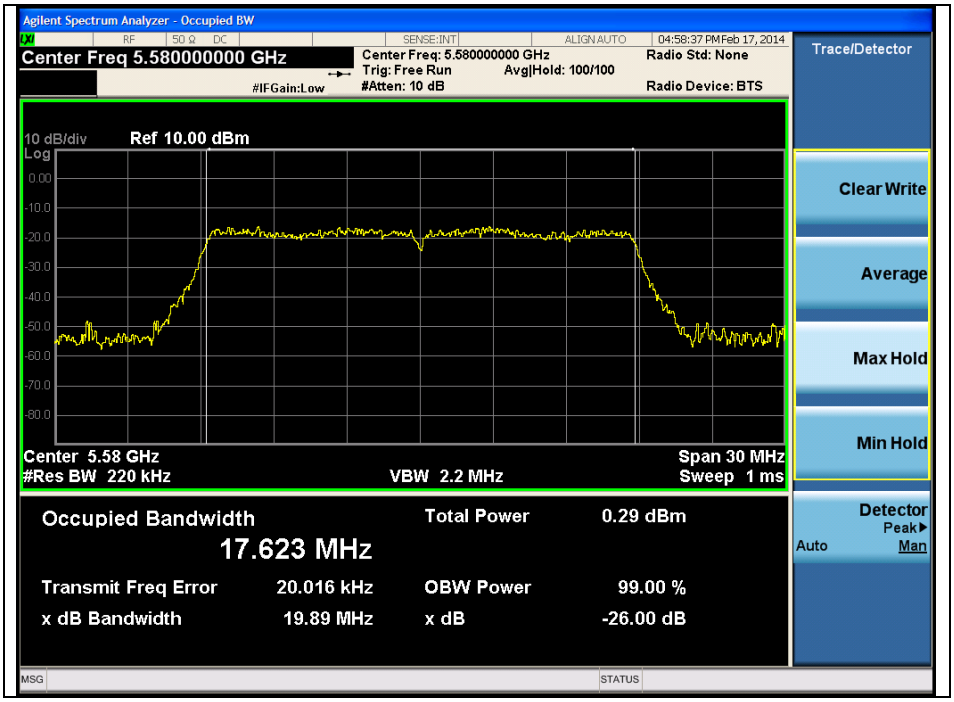


802.11ac_VHT20 (DFS)

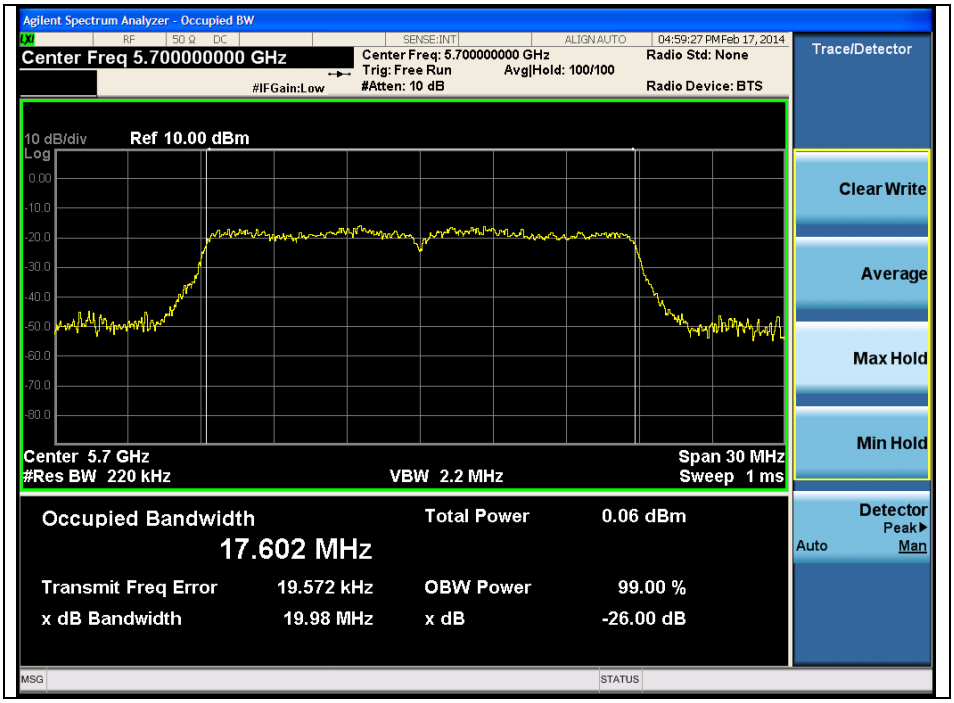
Low Channel (5 500 ㎒)



Middle 1 Channel (5 580 ㎒)



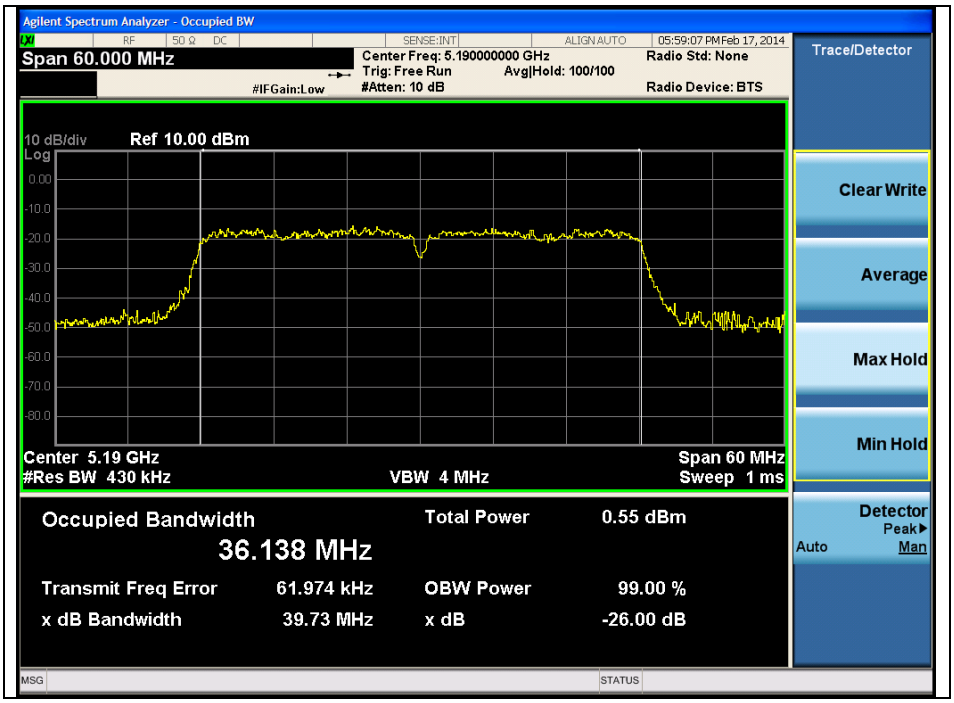
Middle 2 Channel (5 700 ㎒)



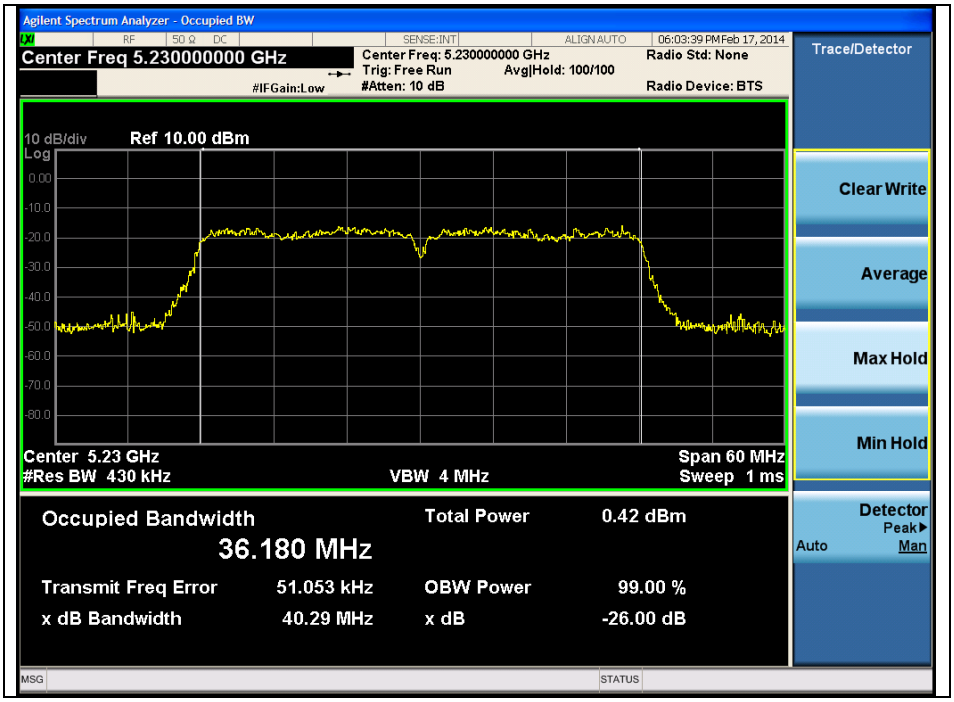
High Channel (5 720 ㎒)

802.11ac_VHT40 (Non-DFS)

Low Channel (5 190 ㎒)

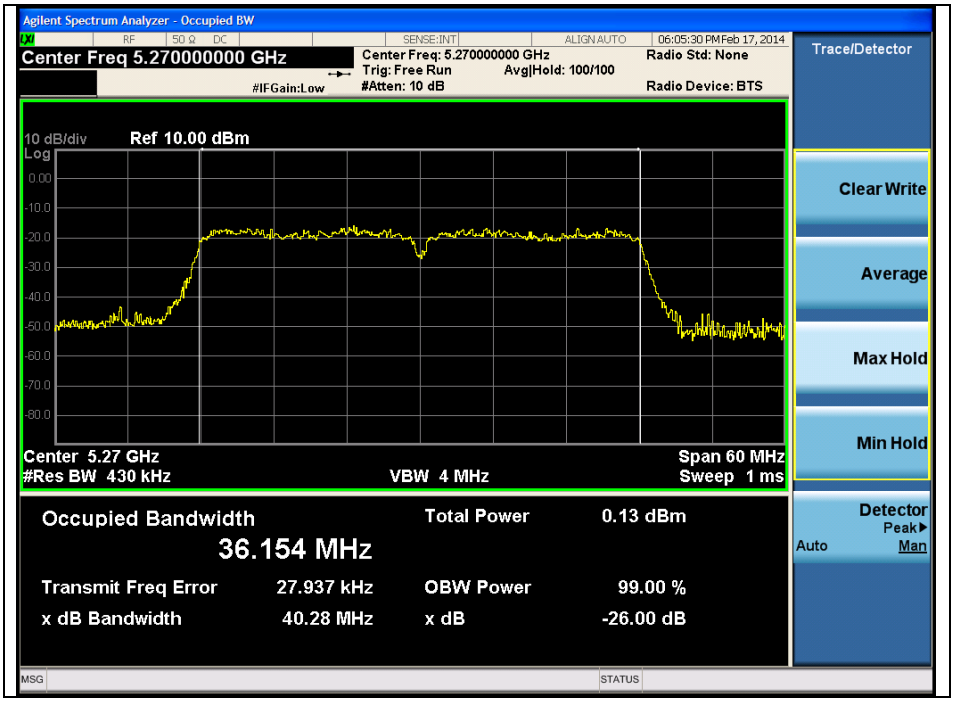


High Channel (5 230 ㎒)

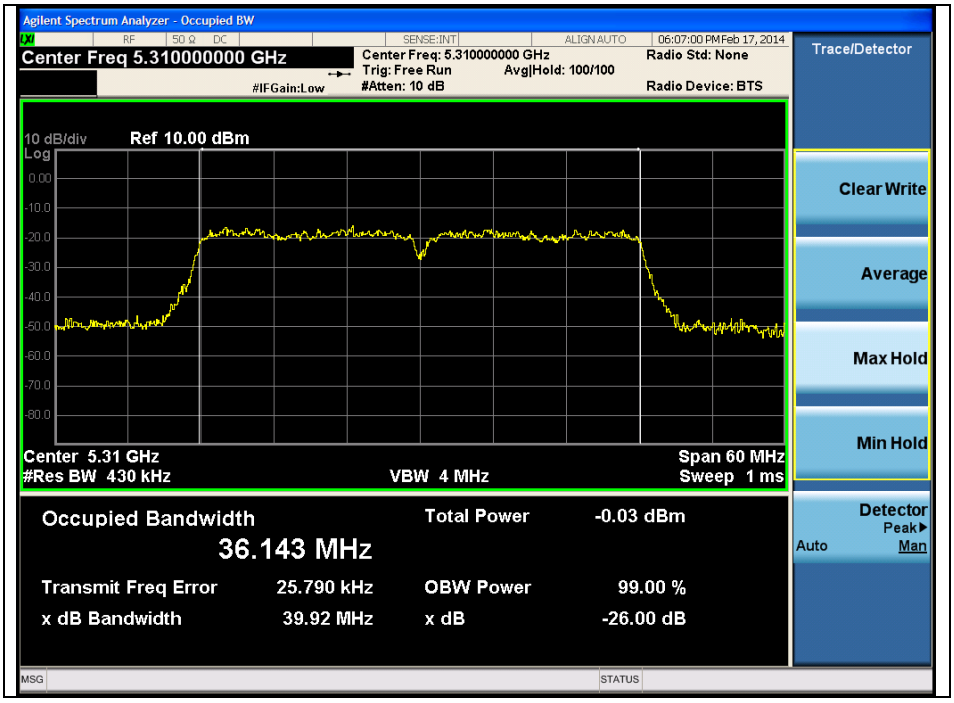


802.11ac_VHT40 (DFS)

Low Channel (5 270 ㎒)



High Channel (5 310 ㎒)



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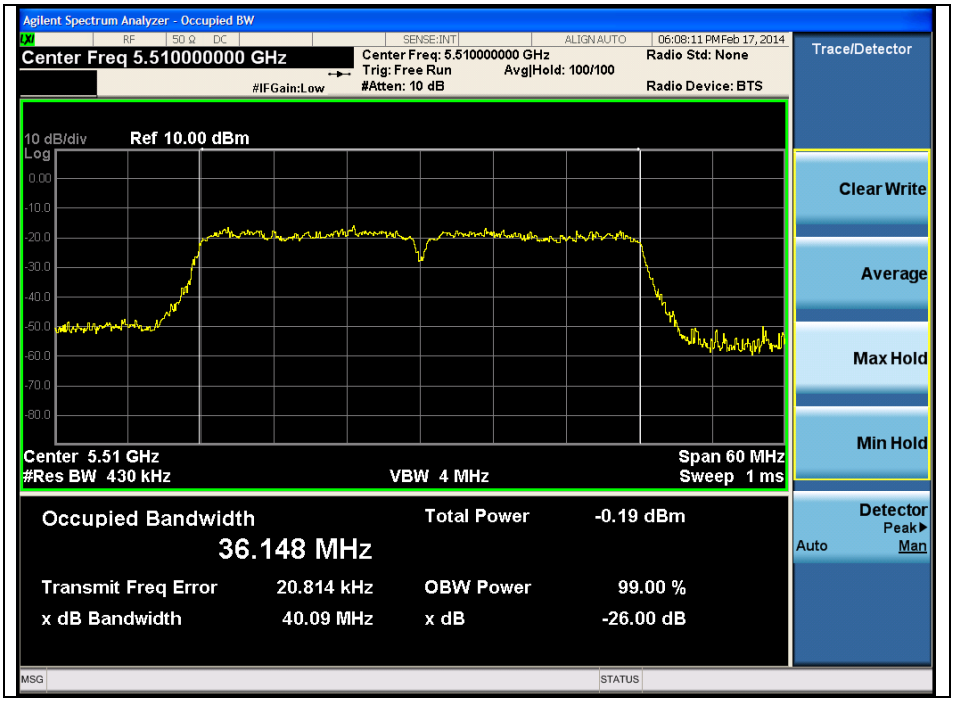
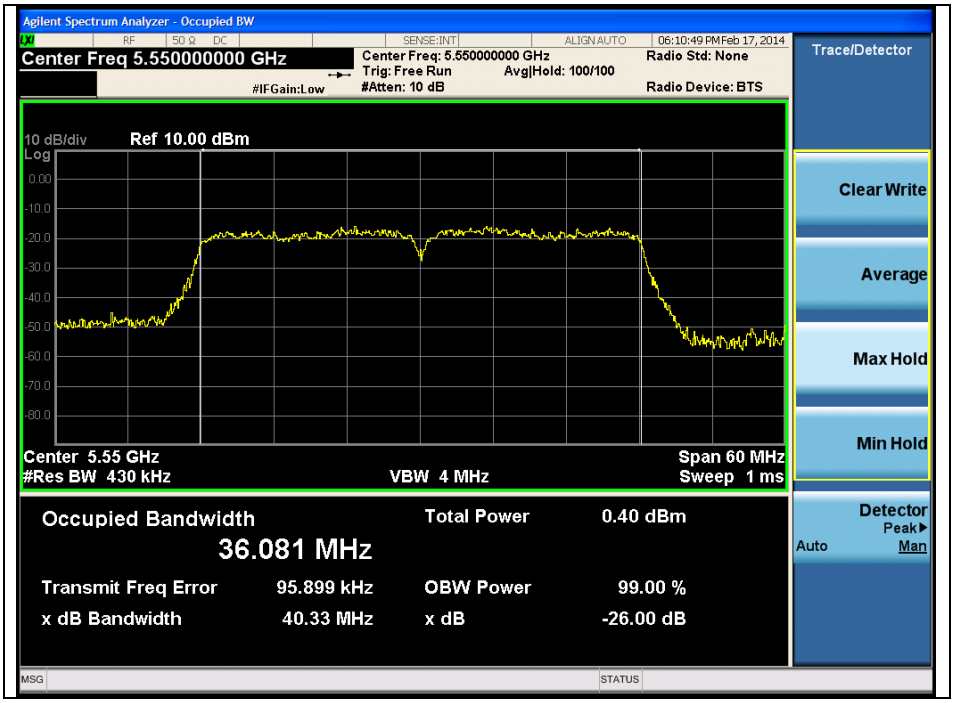
802.11ac_VHT40 (DFS)

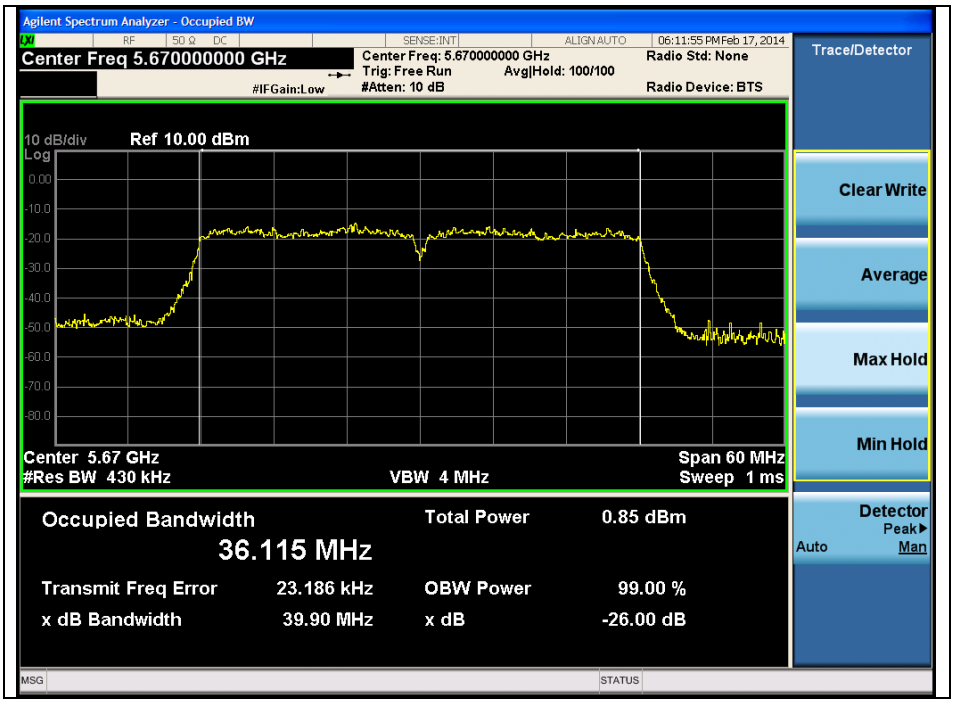
Low Channel (5 510 ㎒)



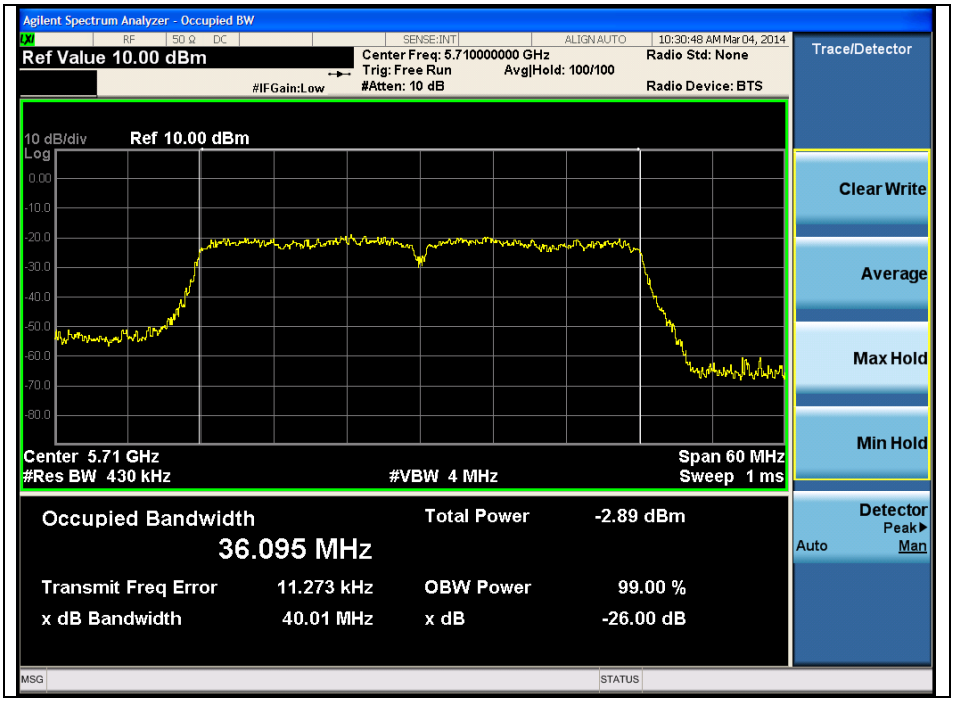
Middle 1 Channel (5 550 ㎒)



Middle 1 Channel (5 670 ㎒)



High Channel (5 710 ㎒)

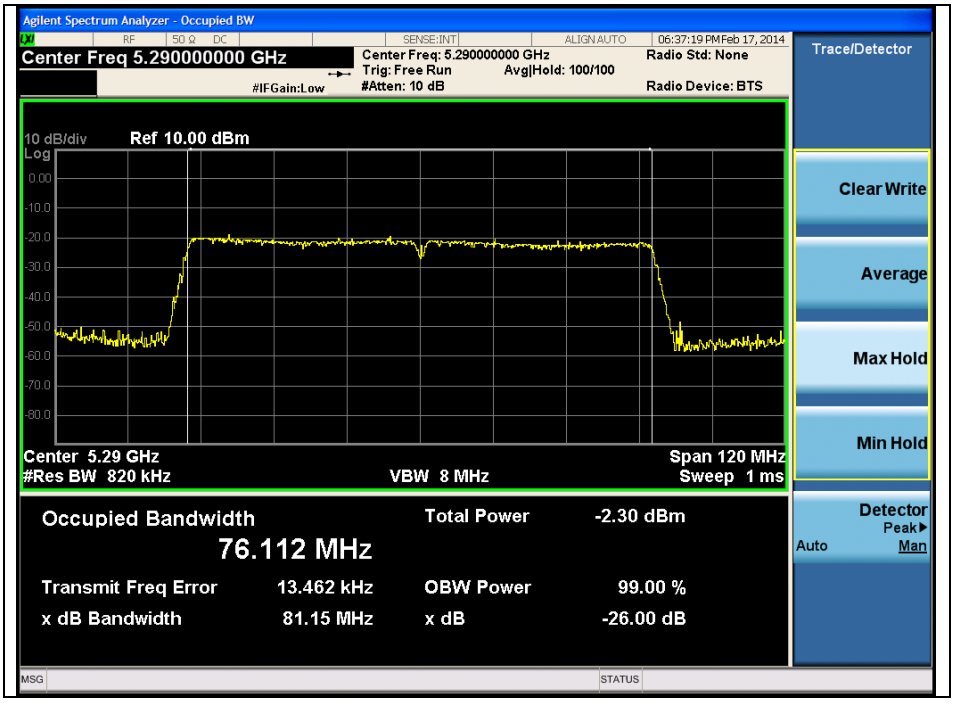


802.11ac_VHT80 (Non-DFS)

Low Channel (5 210 ㎒)

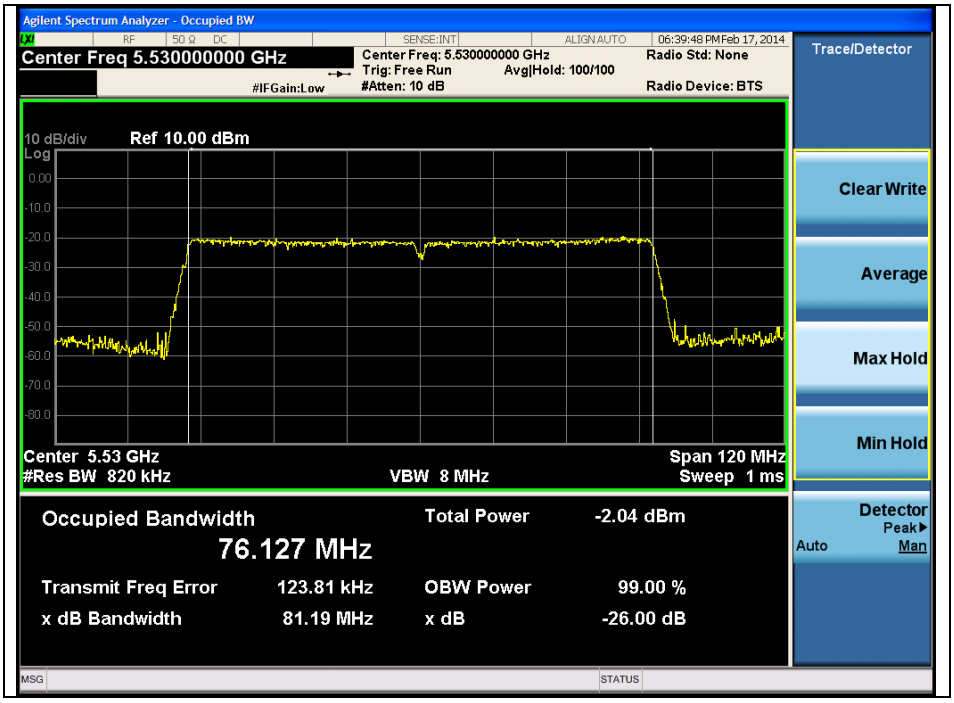
802.11ac_VHT80 (DFS)

Low Channel (5 290 ㎒)

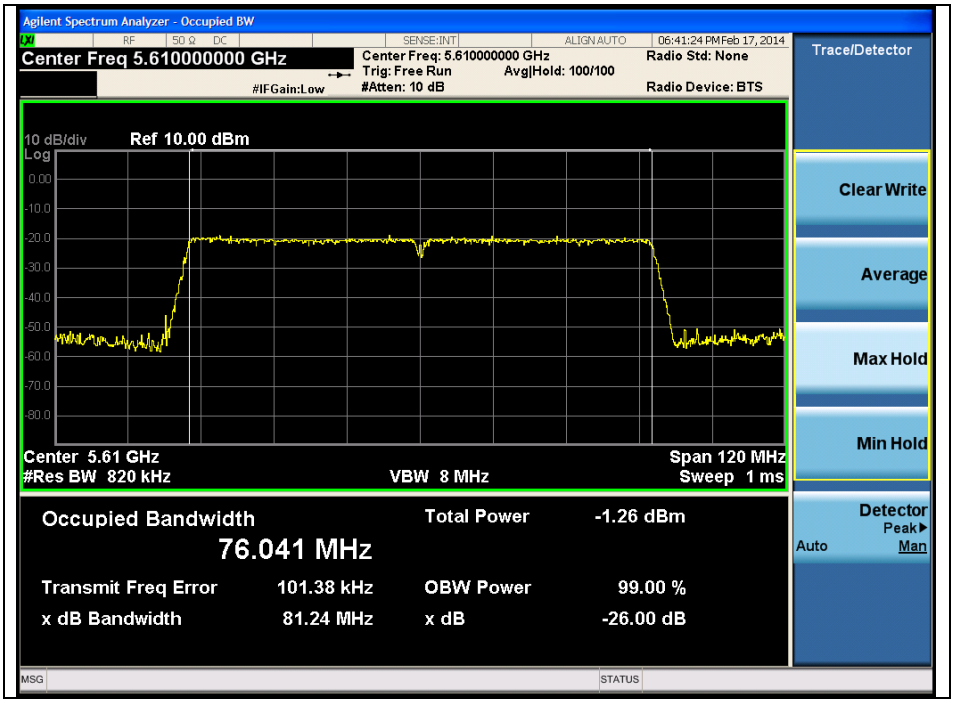


802.11ac_VHT80 (DFS)

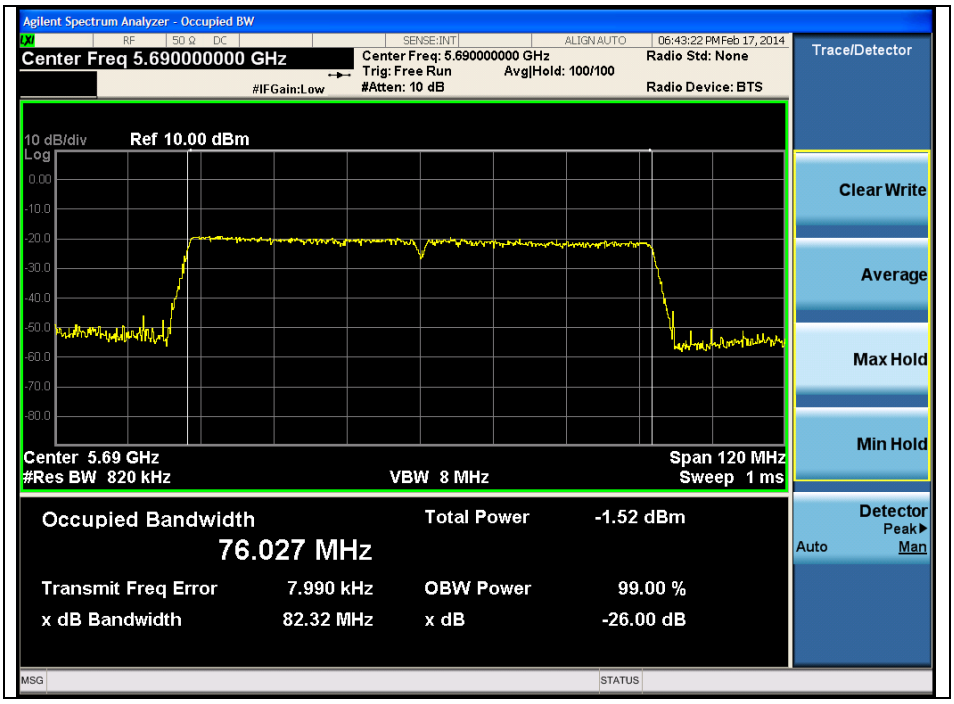
Low Channel (5 530 ㎒)



Middle Channel (5 610 ㎒)



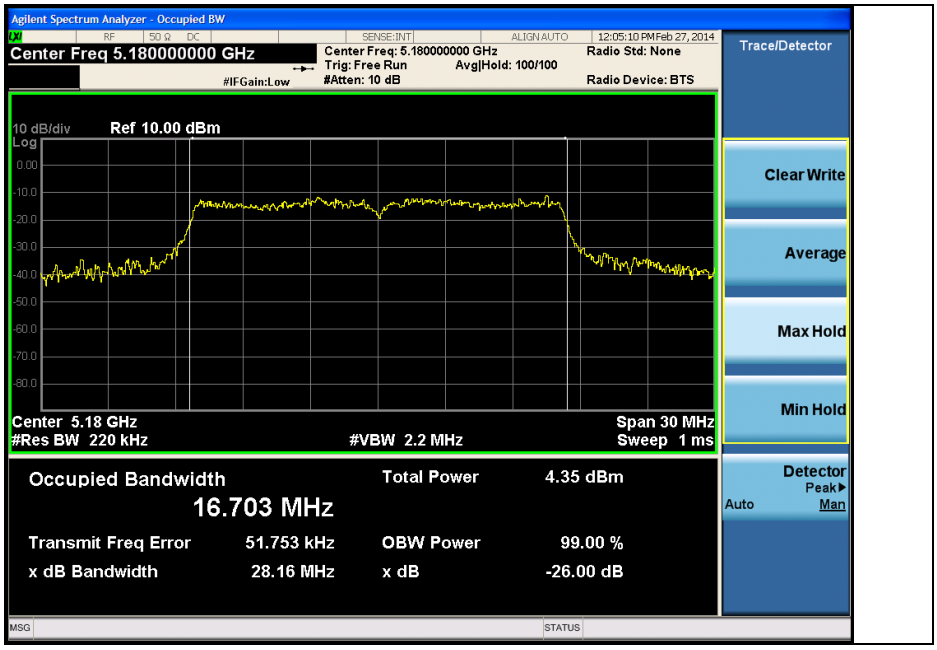
High Channel (5 690 ㎒)



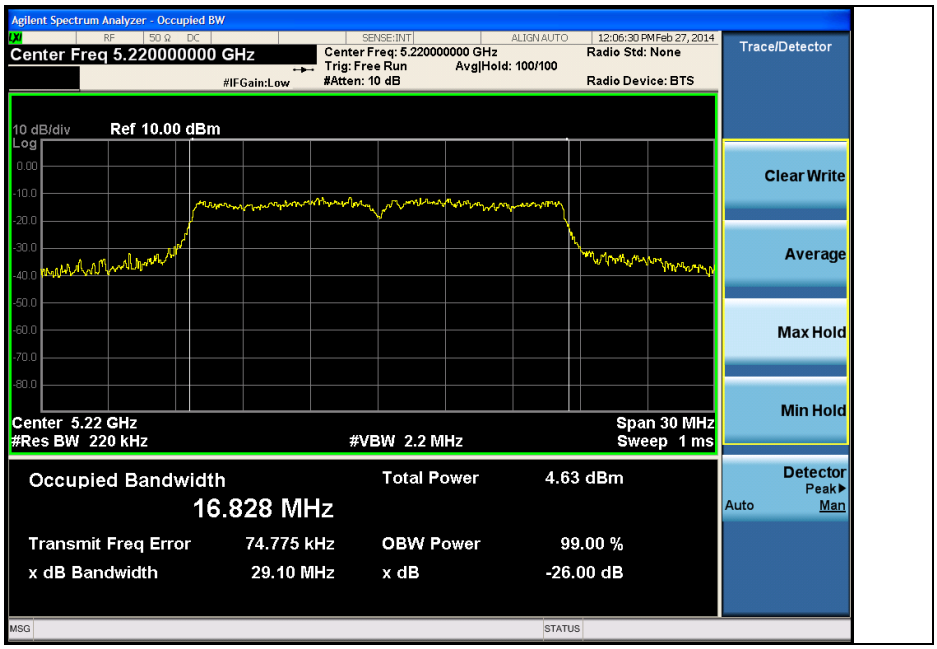
ANT1

802.11a (Non-DFS)

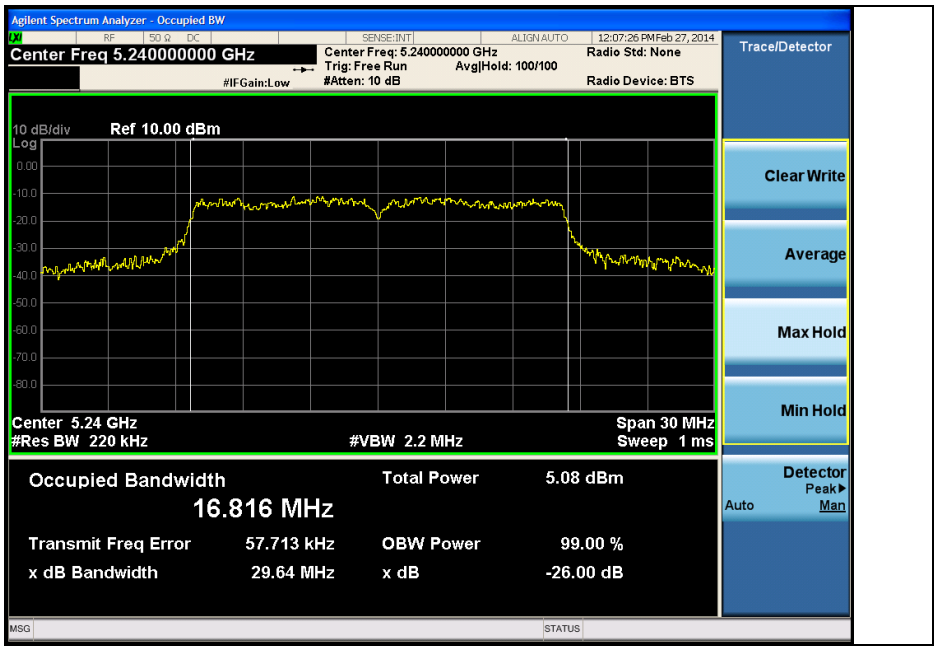
Low Channel (5 180 ㎒)



Middle Channel (5 220 ㎒)

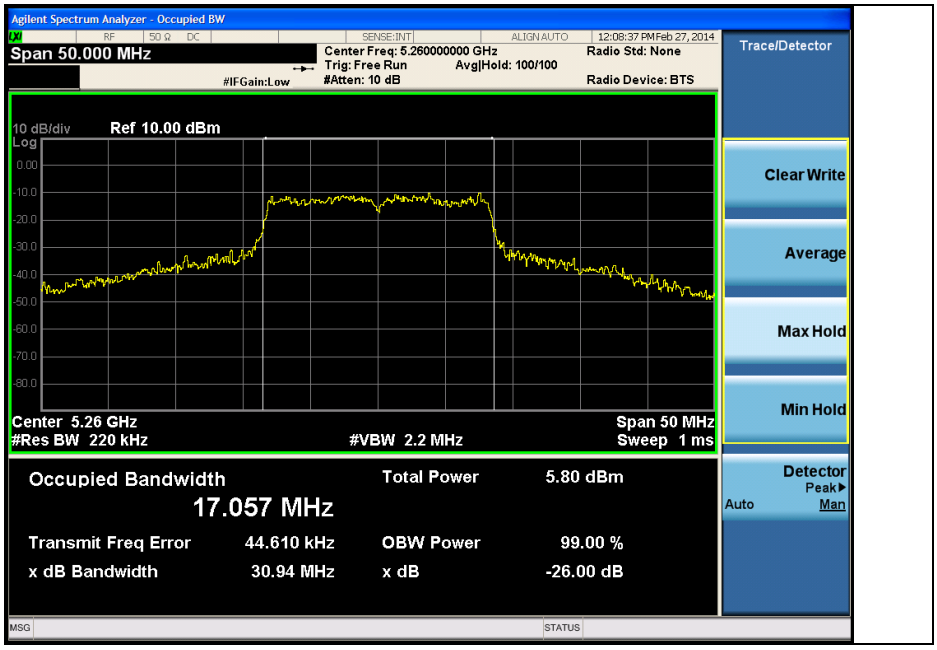


High Channel (5 240 ㎒)

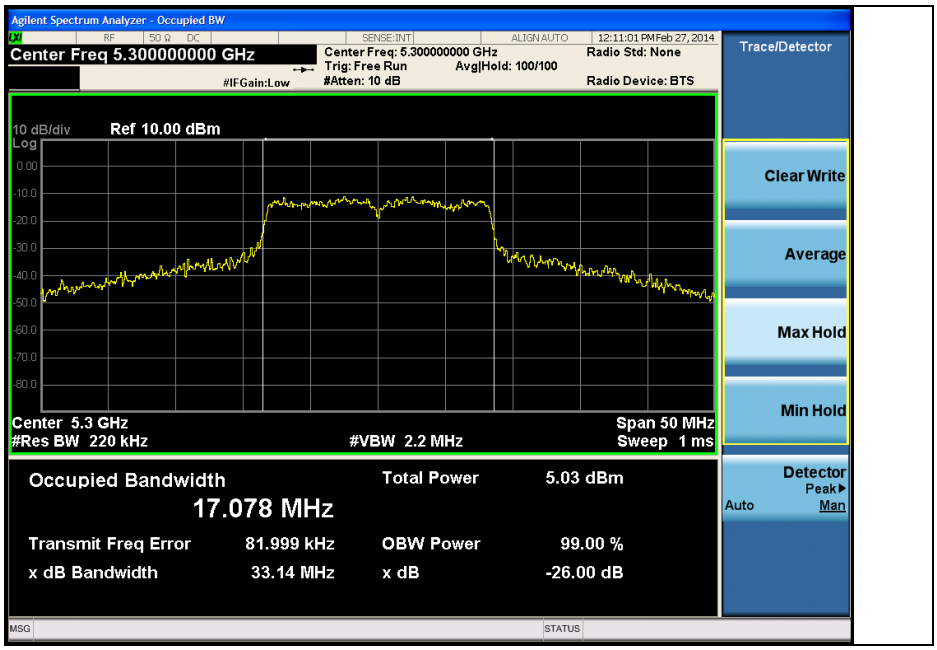


802.11a (DFS)

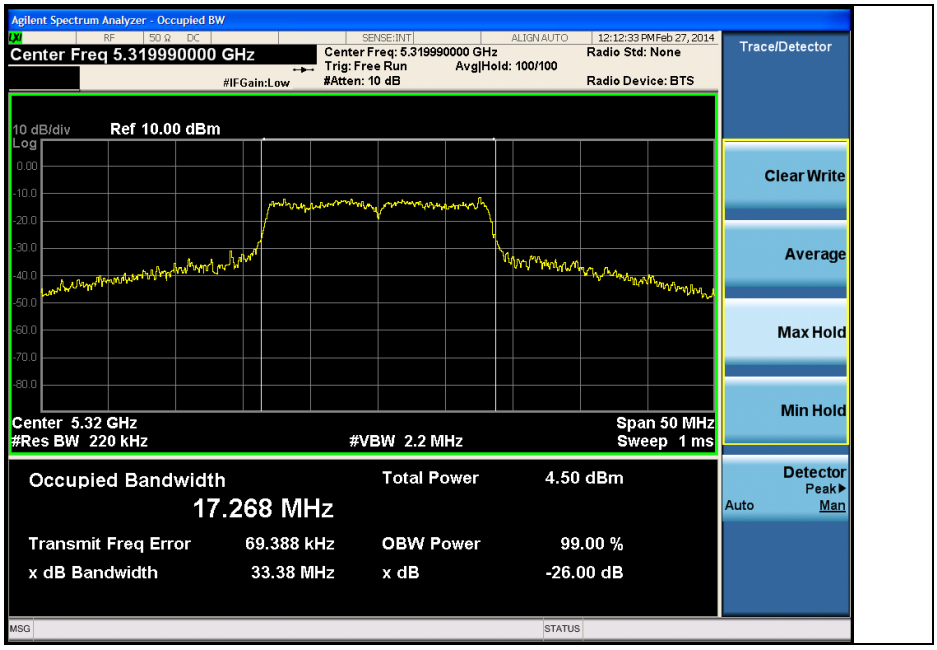
Low Channel (5 260 ㎒)



Middle Channel (5 300 ㎒)

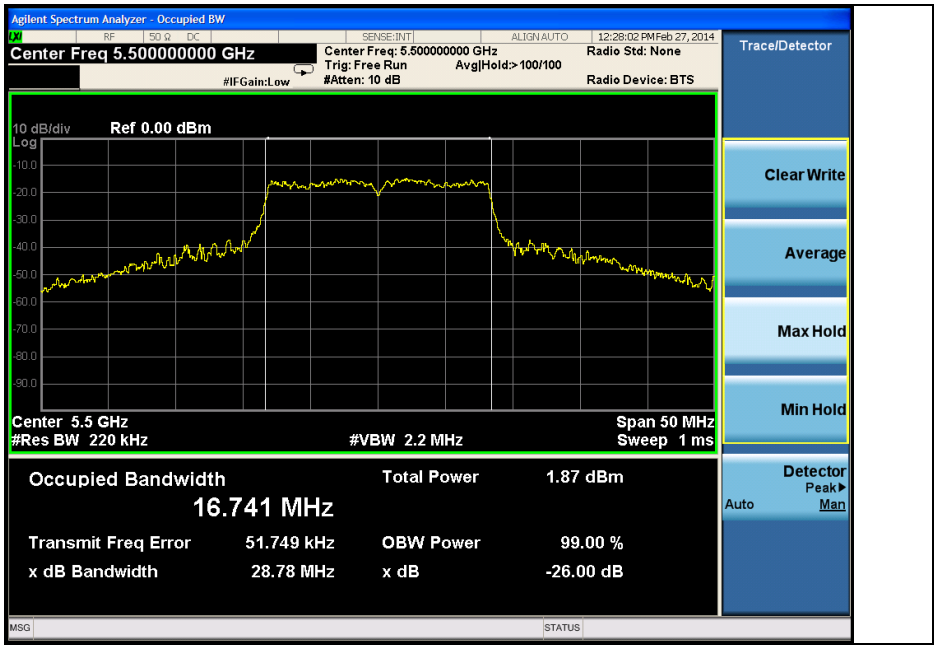


High Channel (5 320 ㎒)

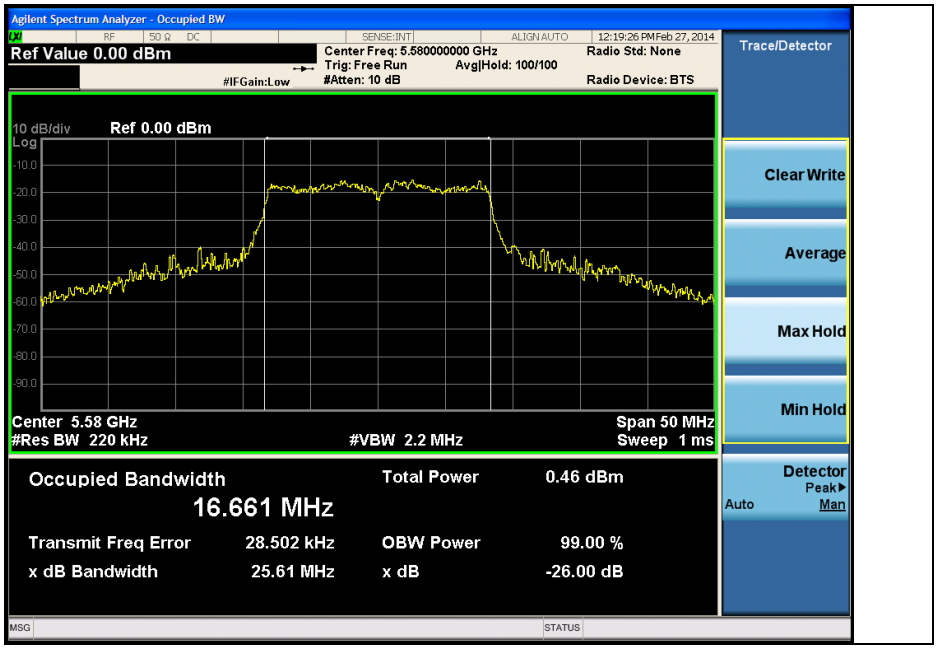


802.11a (DFS)

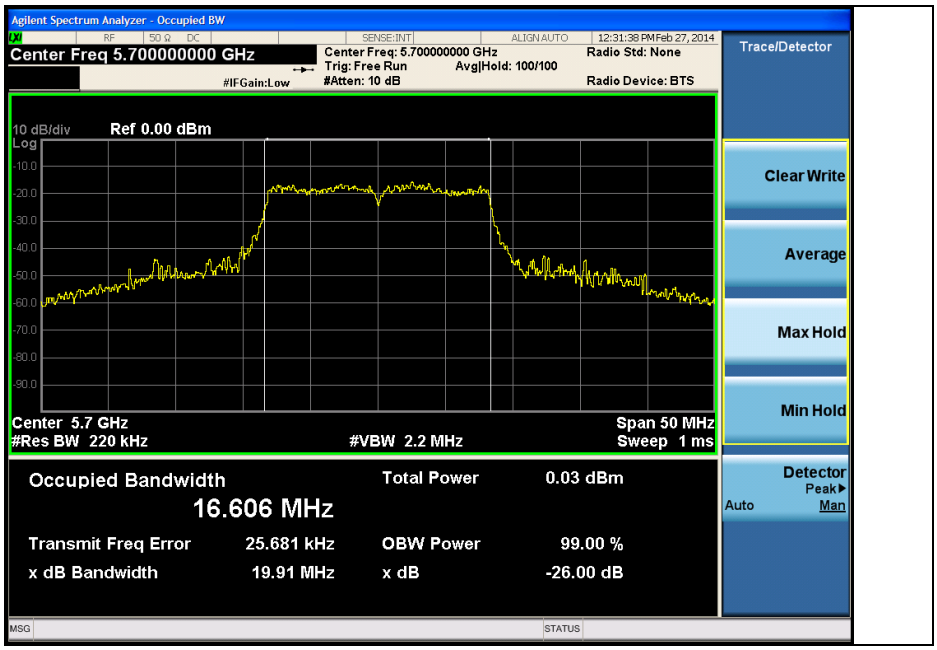
Low Channel (5 500 ㎒)



Middle Channel (5 580 ㎒)

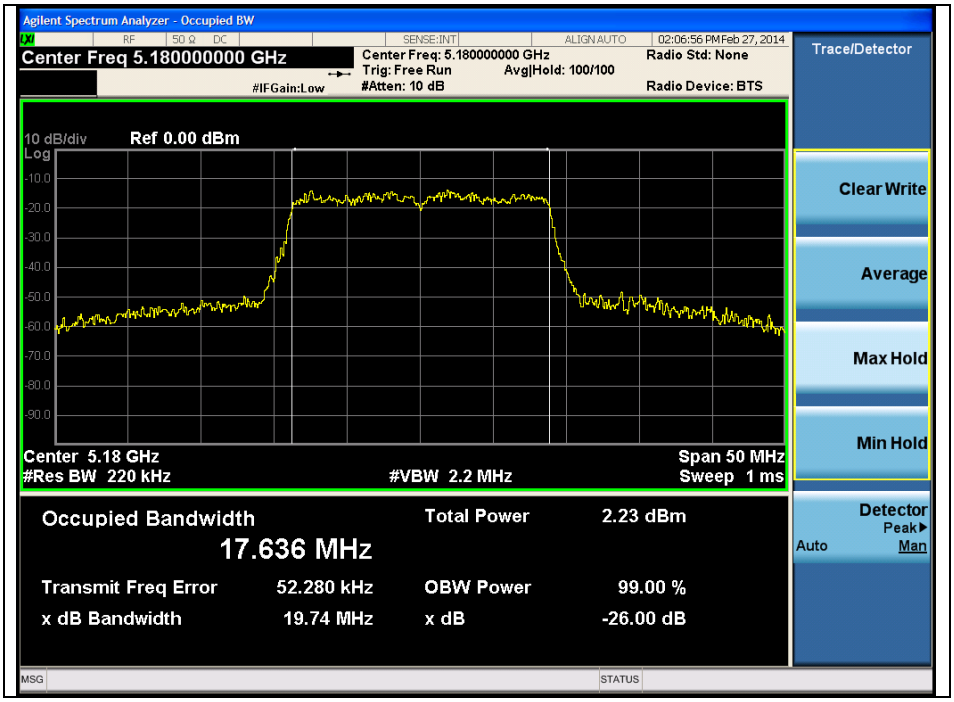


High Channel (5 700 ㎒)



802.11n_HT20 (Non-DFS)

Low Channel (5 180 ㎒)

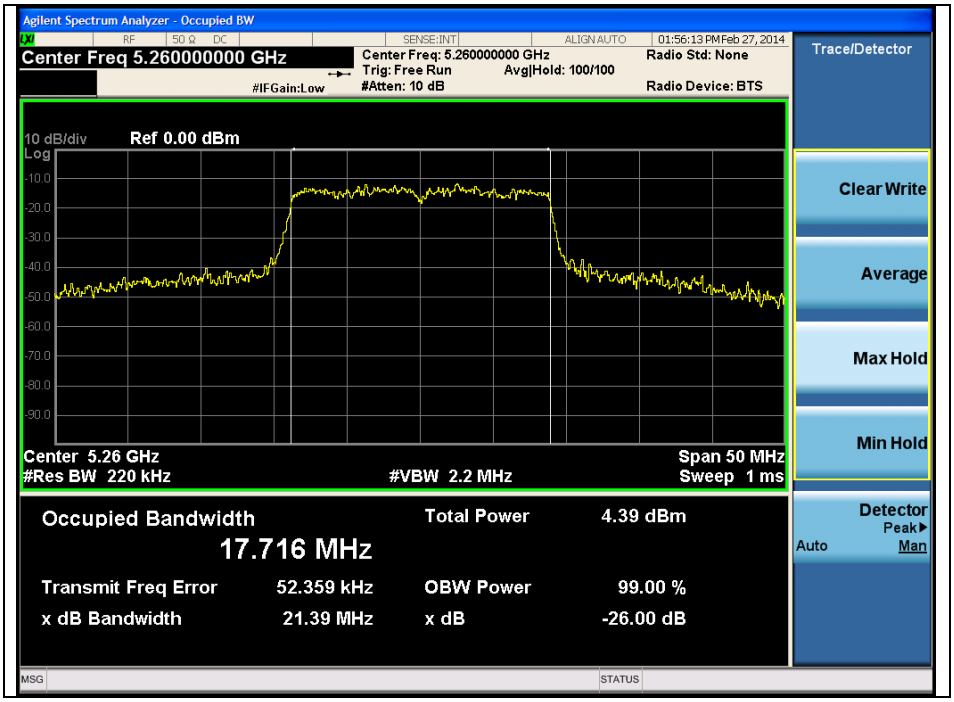


Middle Channel (5 220 ㎒)

High Channel (5 240 ㎒)

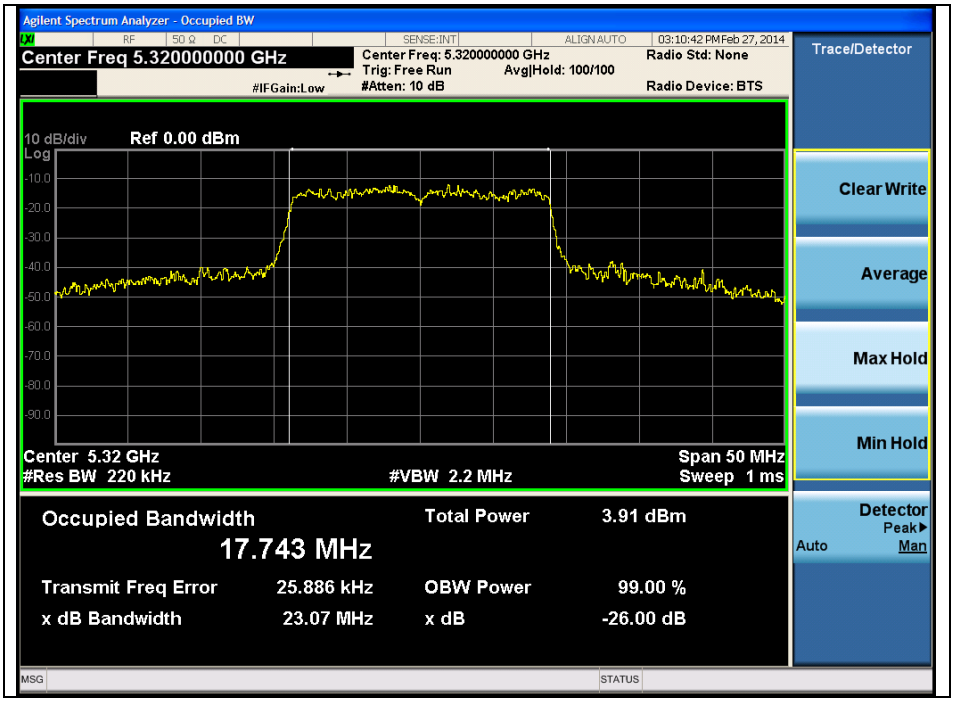
802.11n_HT20 (DFS)

Low Channel (5 260 ㎒)



Middle Channel (5 300 ㎒)

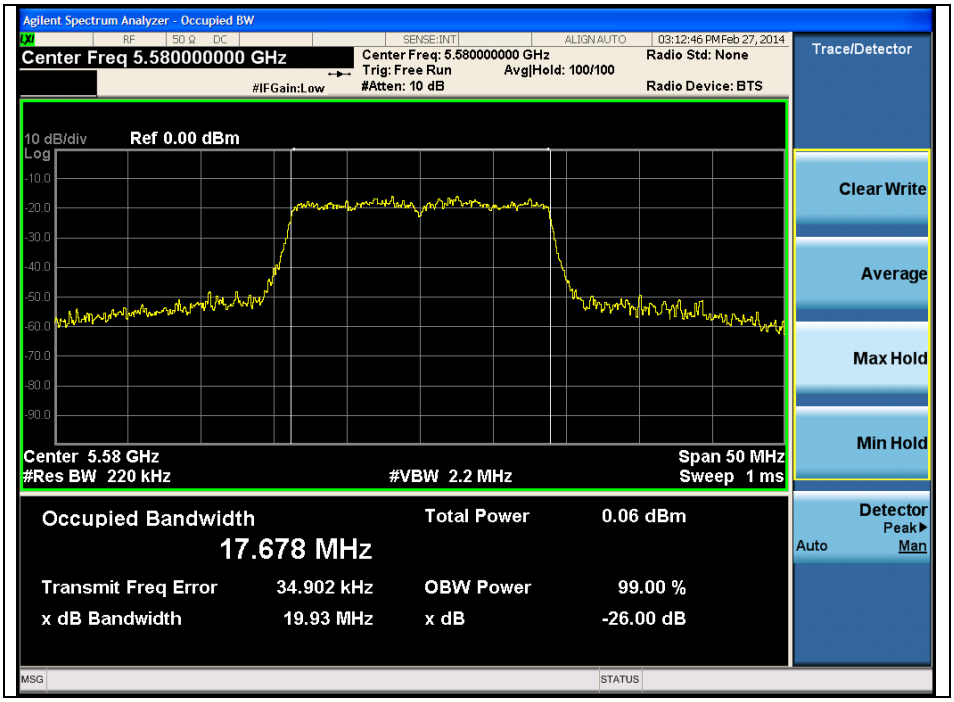
High Channel (5 320 ㎒)



802.11n_HT20 (DFS)

Low Channel (5 500 ㎒)

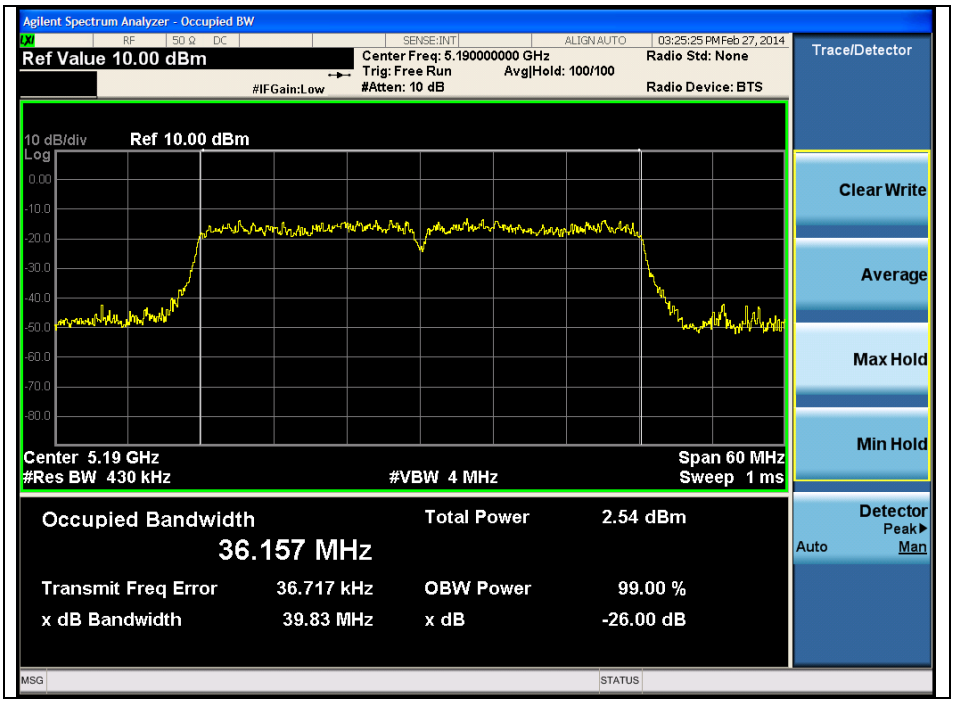
Middle Channel (5 580 ㎒)



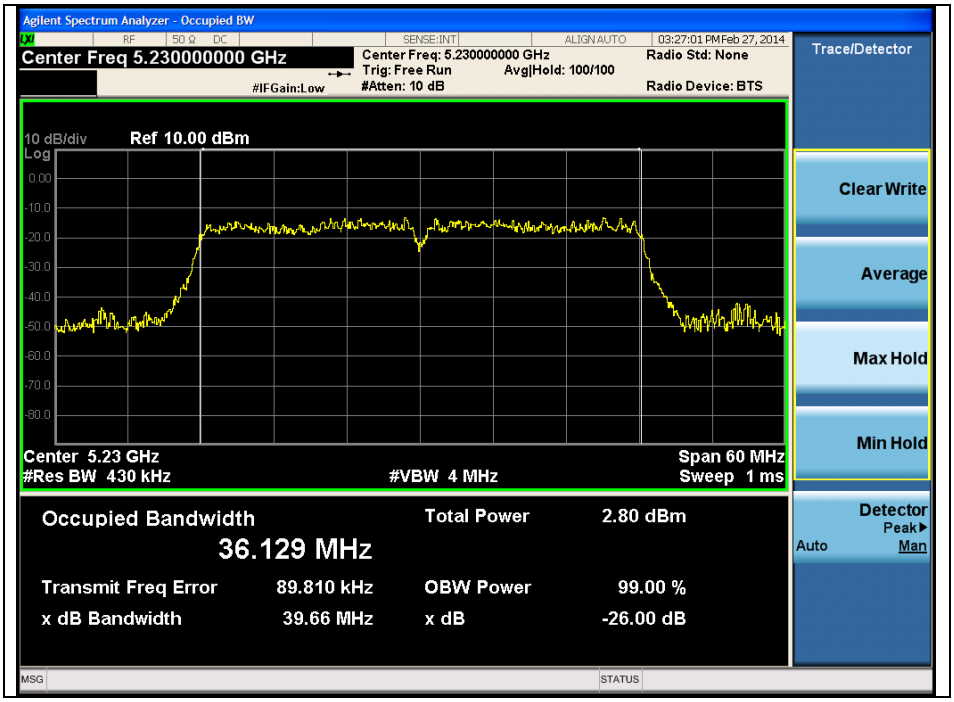
High Channel (5 700 ㎒)

802.11n_HT40 (Non-DFS)

Low Channel (5 190 ㎒)

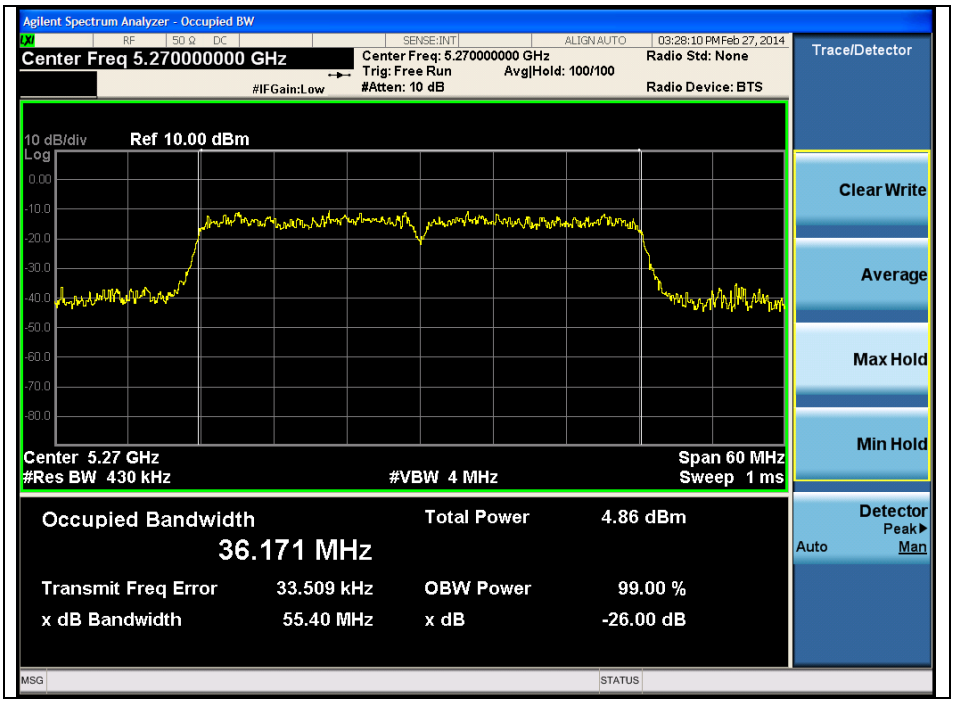


High Channel (5 230 ㎒)

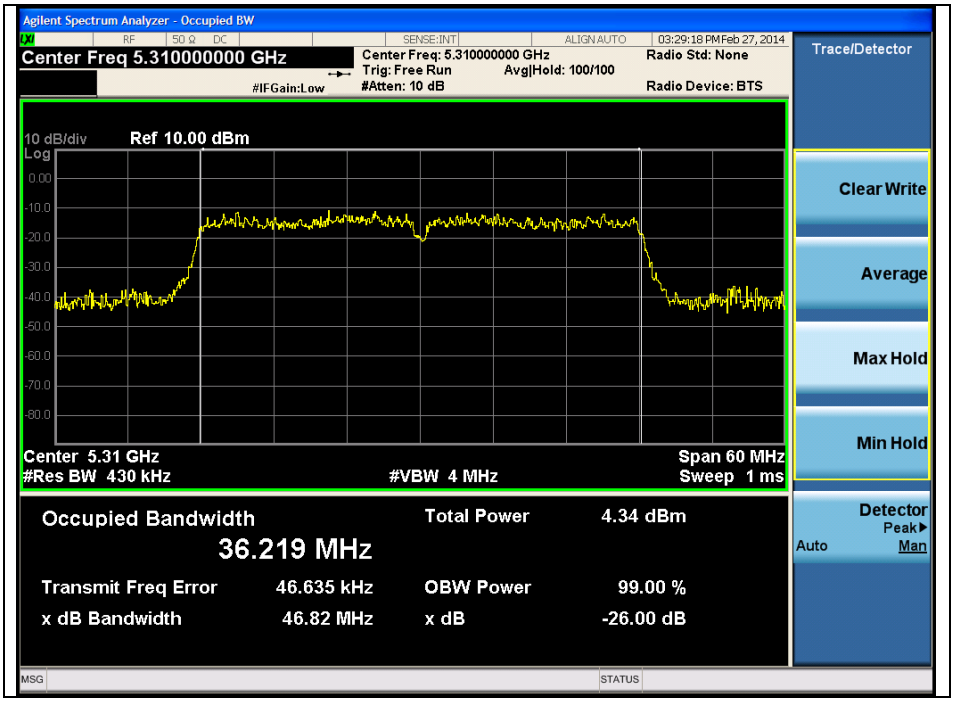


802.11n_HT40 (DFS)

Low Channel (5 270 ㎒)



High Channel (5 310 ㎒)



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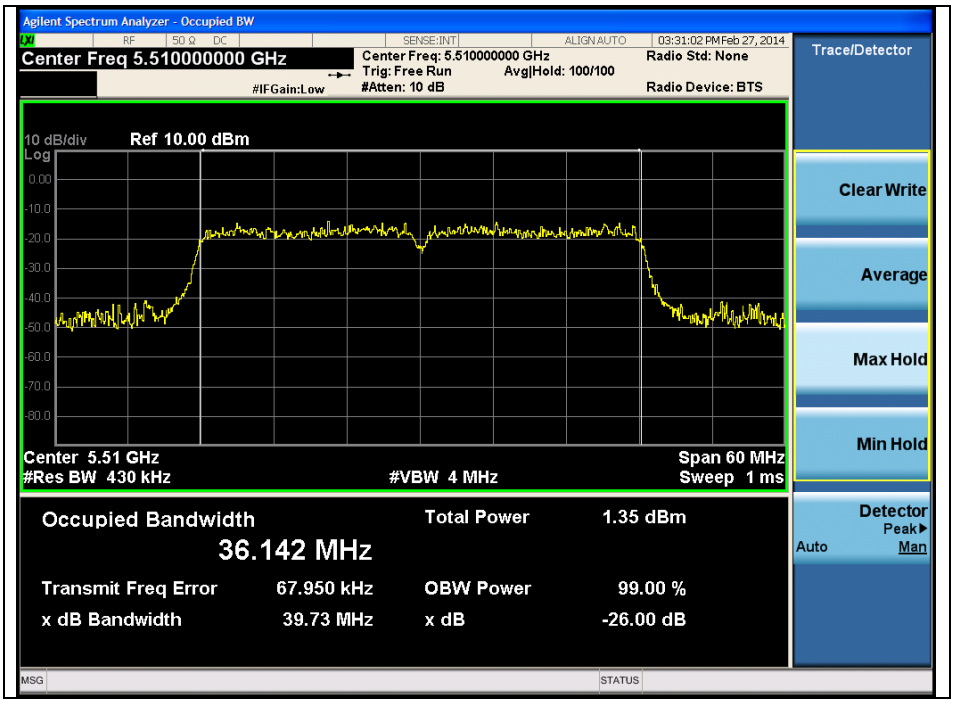
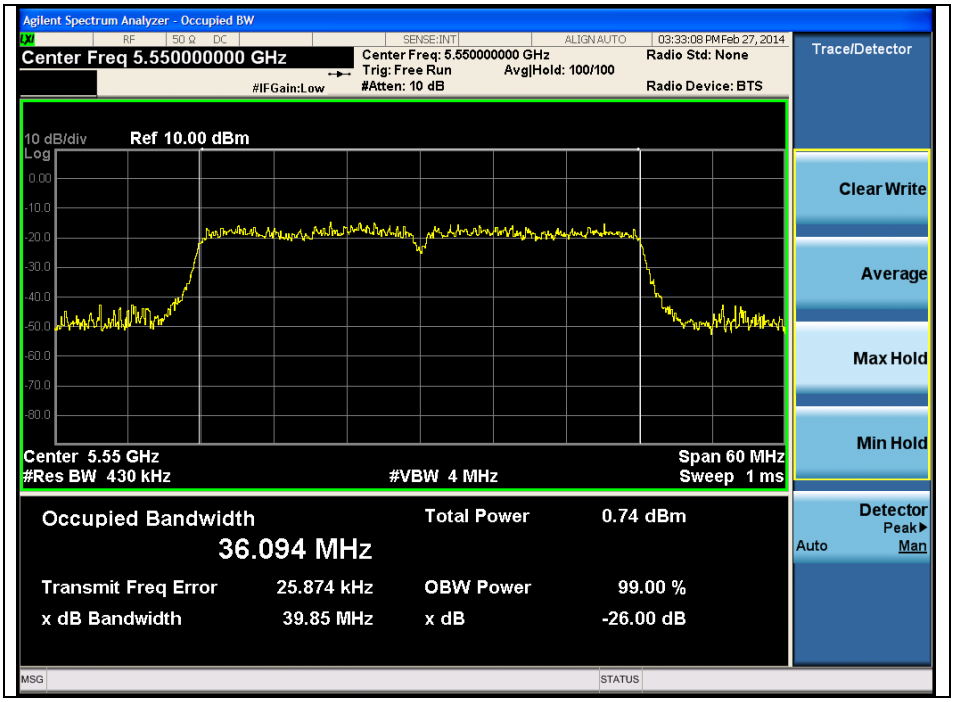
802.11n_HT40 (DFS)

Low Channel (5 510 ㎒)



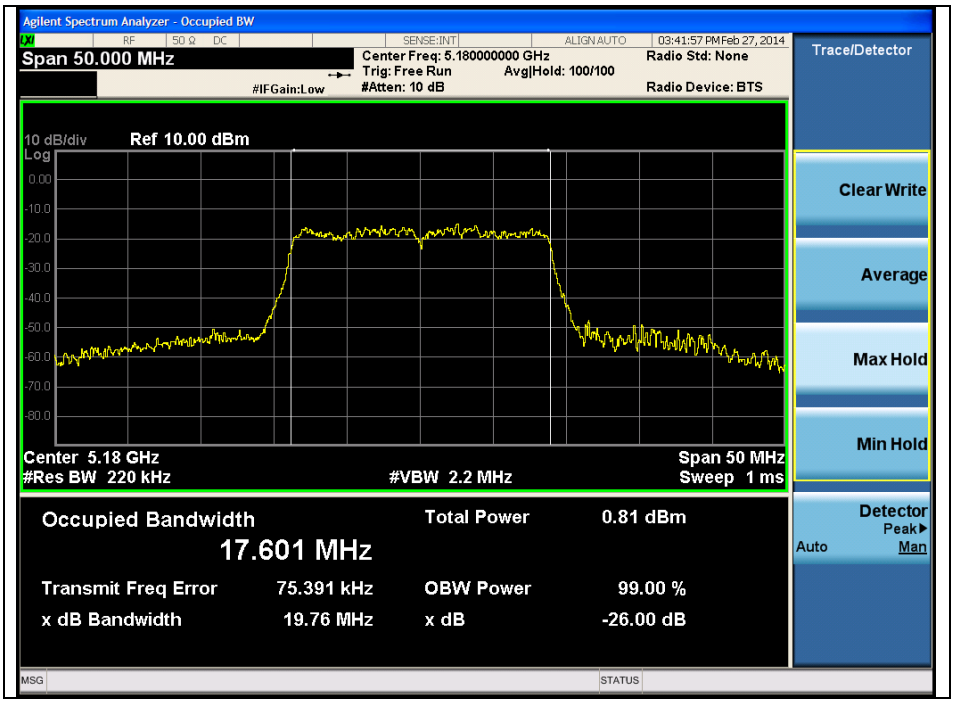
Low Channel (5 550 ㎒)



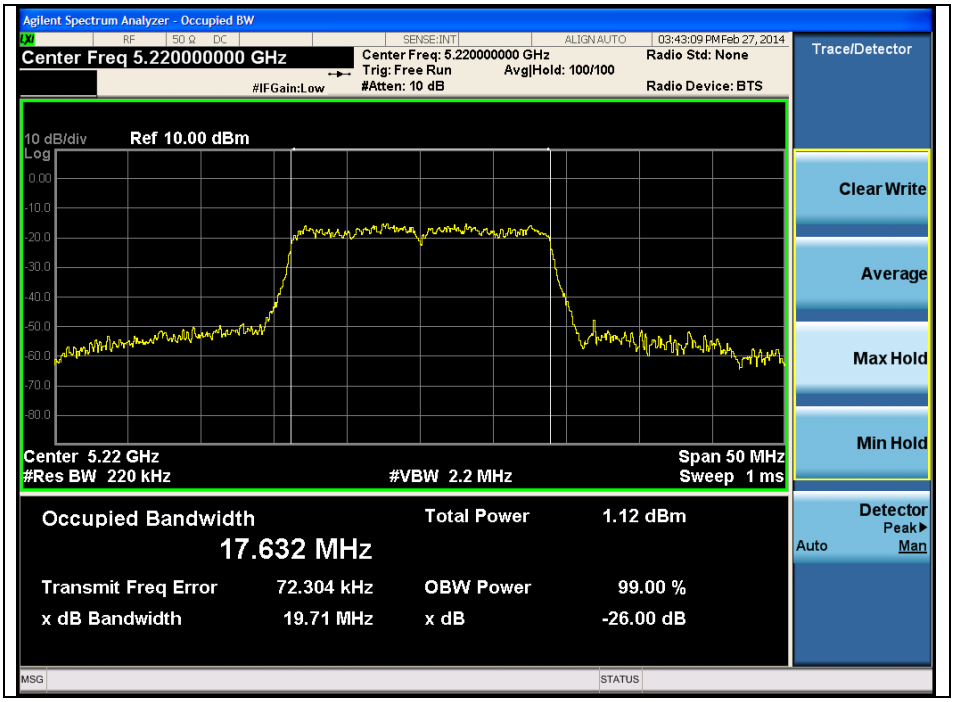
High Channel (5 670 ㎒)

802.11ac_VHT20 (Non-DFS)

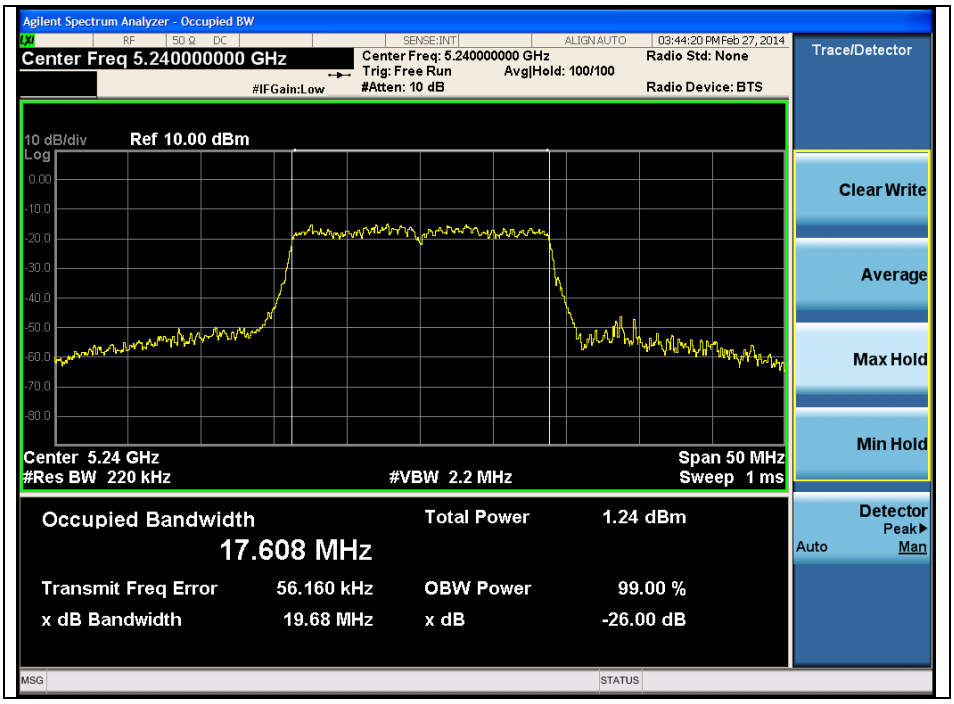
Low Channel (5 180 ㎒)



Middle Channel (5 220 ㎒)

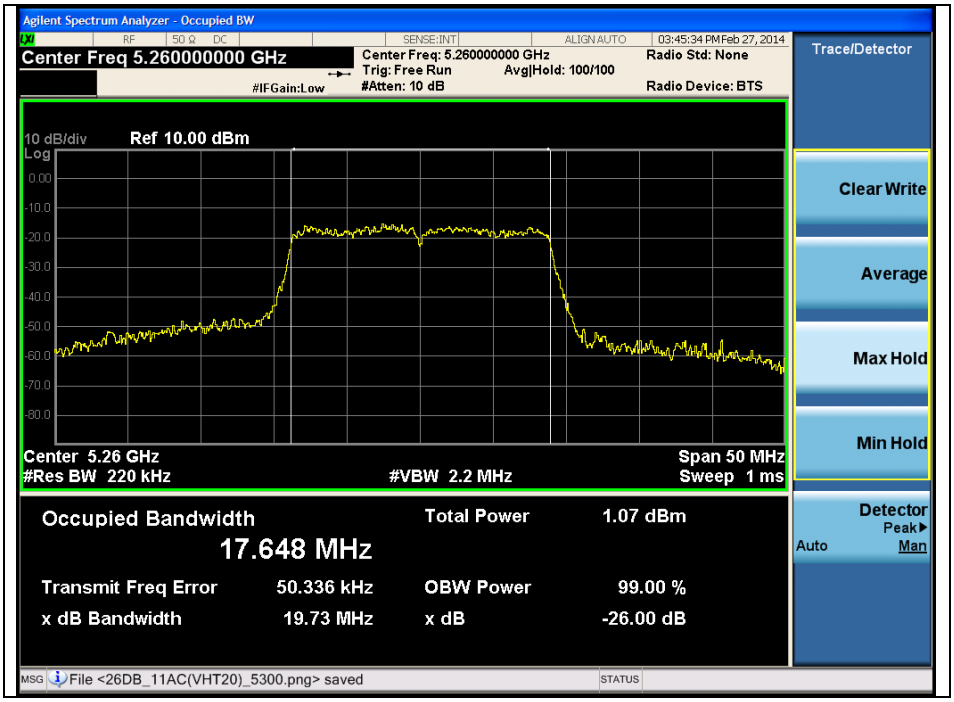


High Channel (5 240 ㎒)



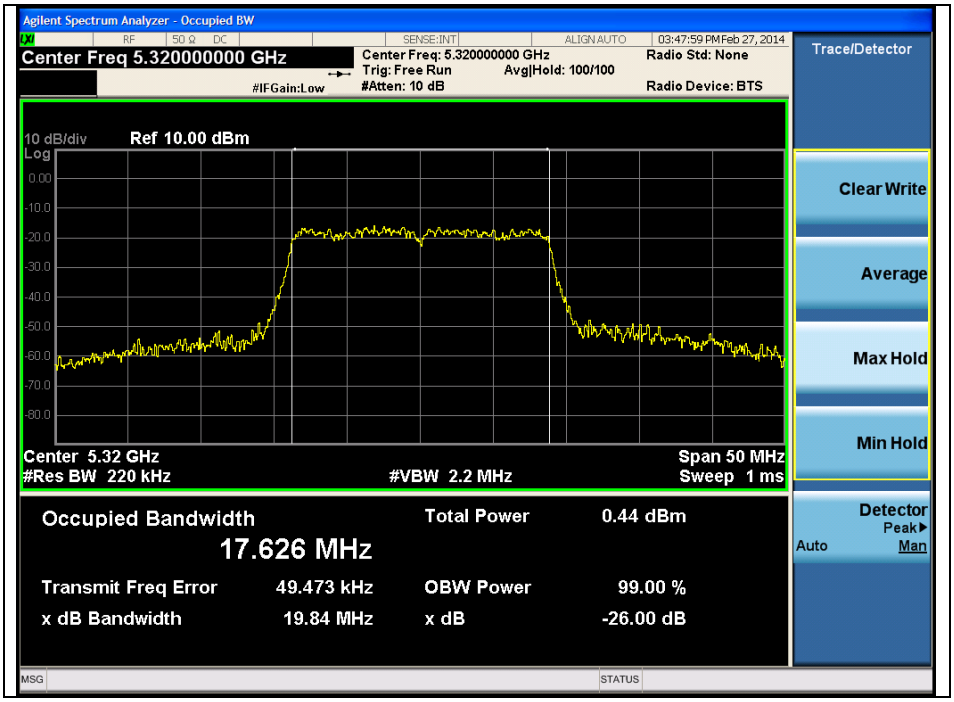
802.11ac_VHT20 (DFS)

Low Channel (5 260 ㎒)



Middle Channel (5 300 ㎒)

High Channel (5 320 ㎒)



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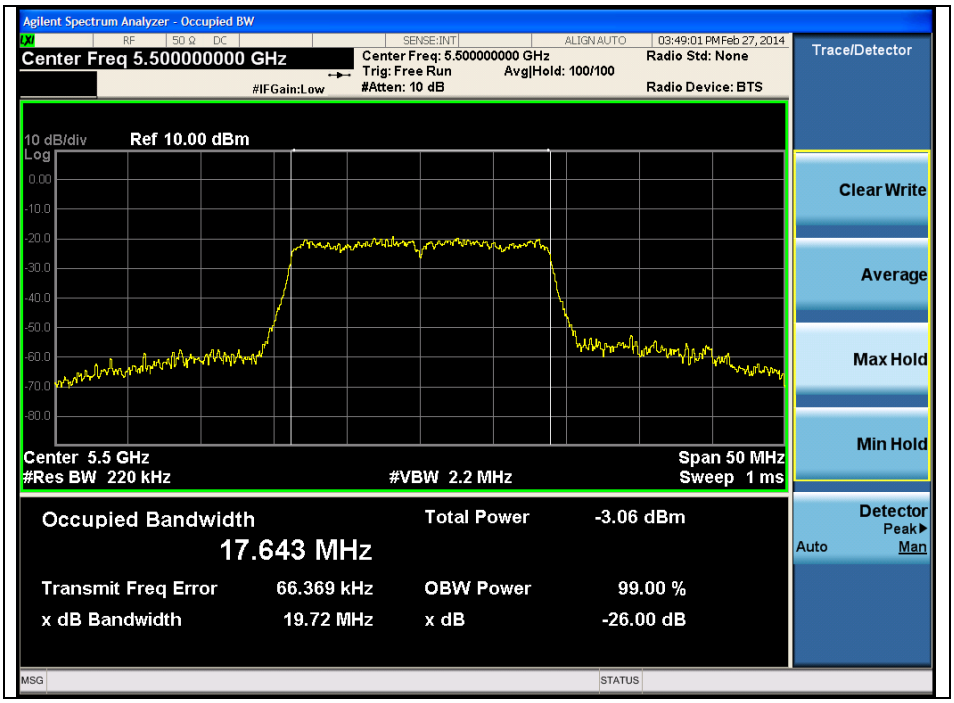
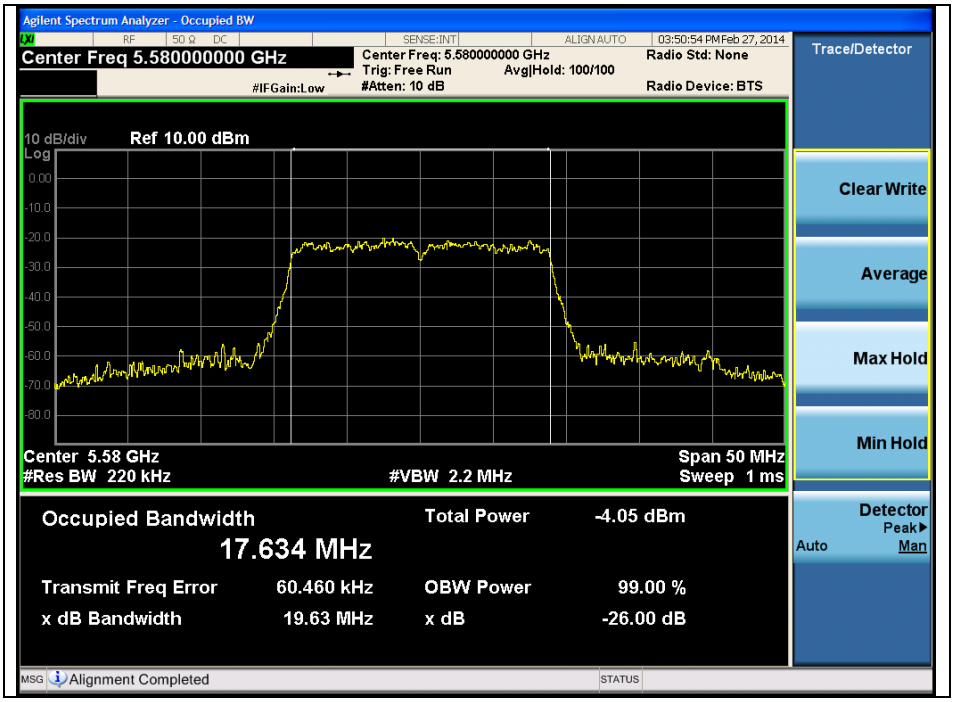
802.11ac_VHT20 (DFS)

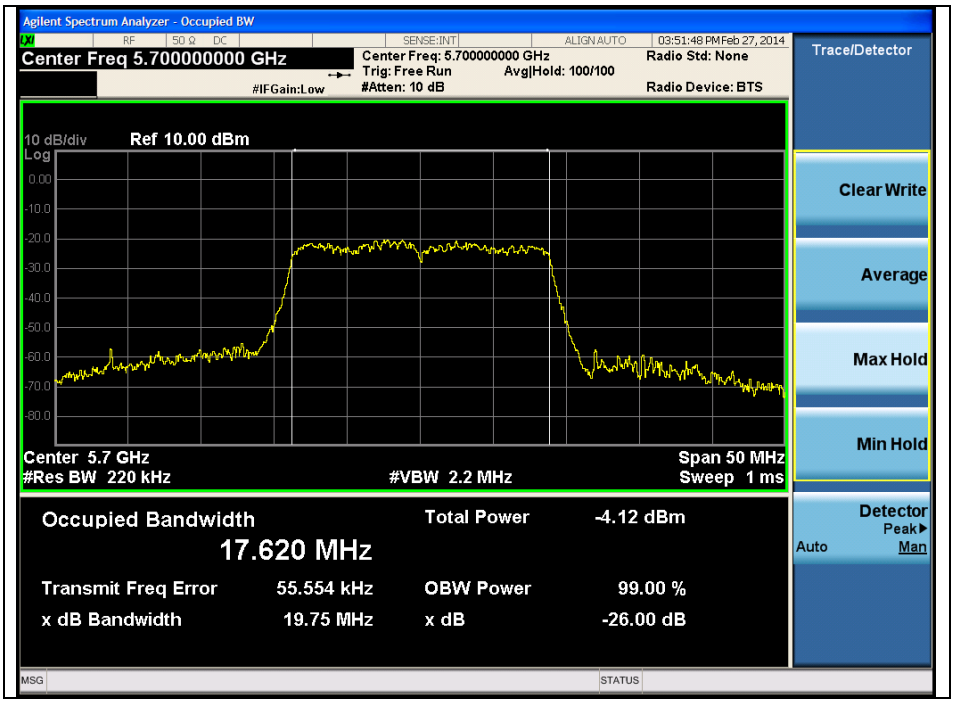
Low Channel (5 500 ㎒)



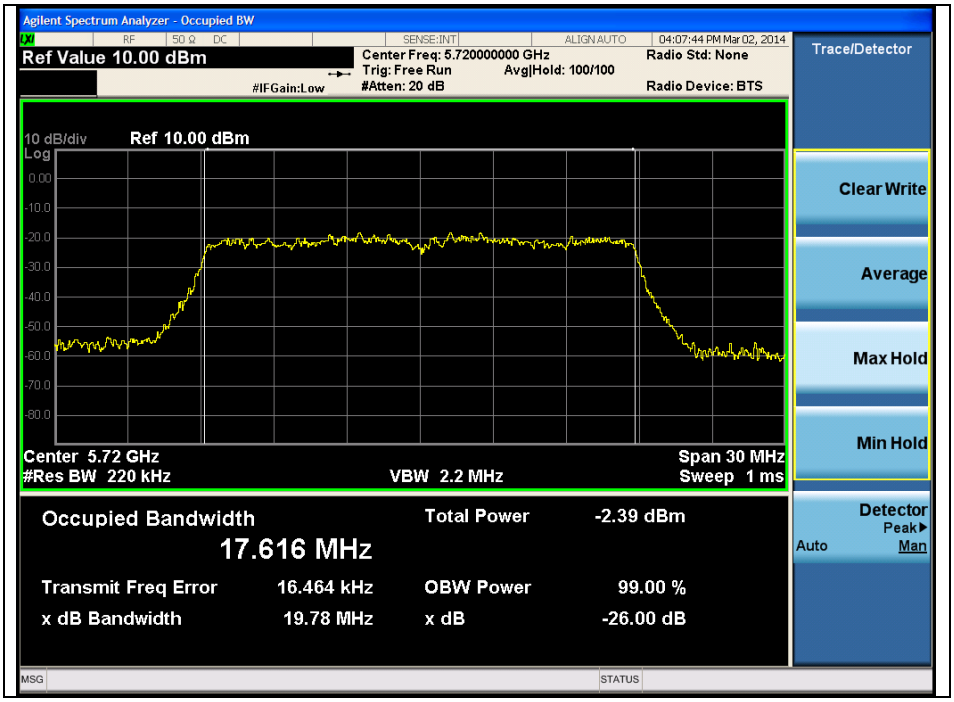
Middle 1 Channel (5 580 ㎒)



Middle 2 Channel (5 700 ㎒)

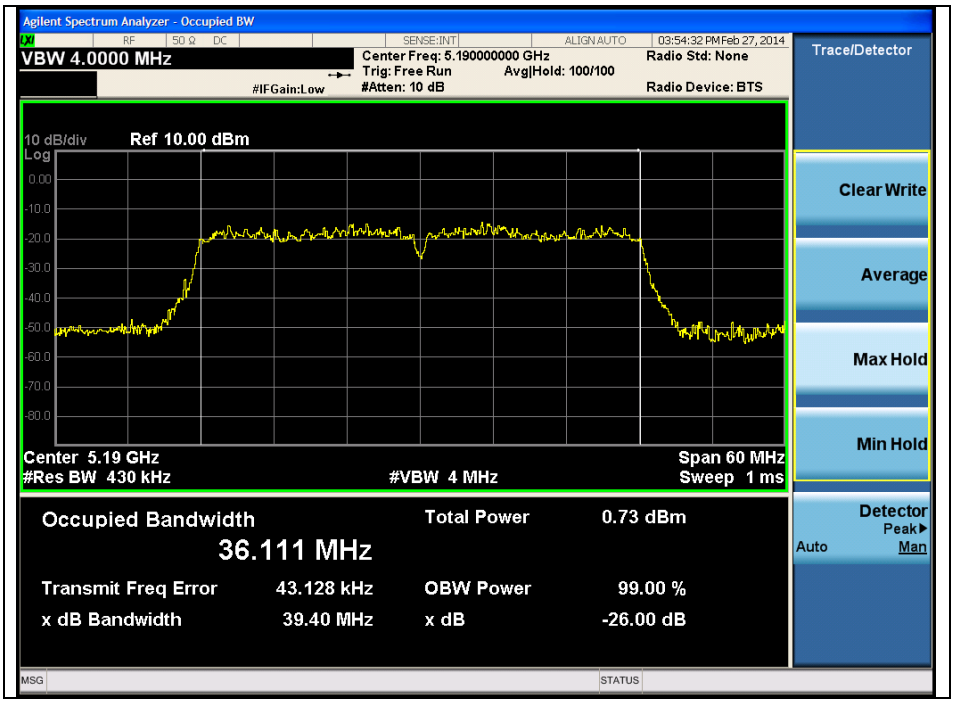


High Channel (5 720 ㎒)

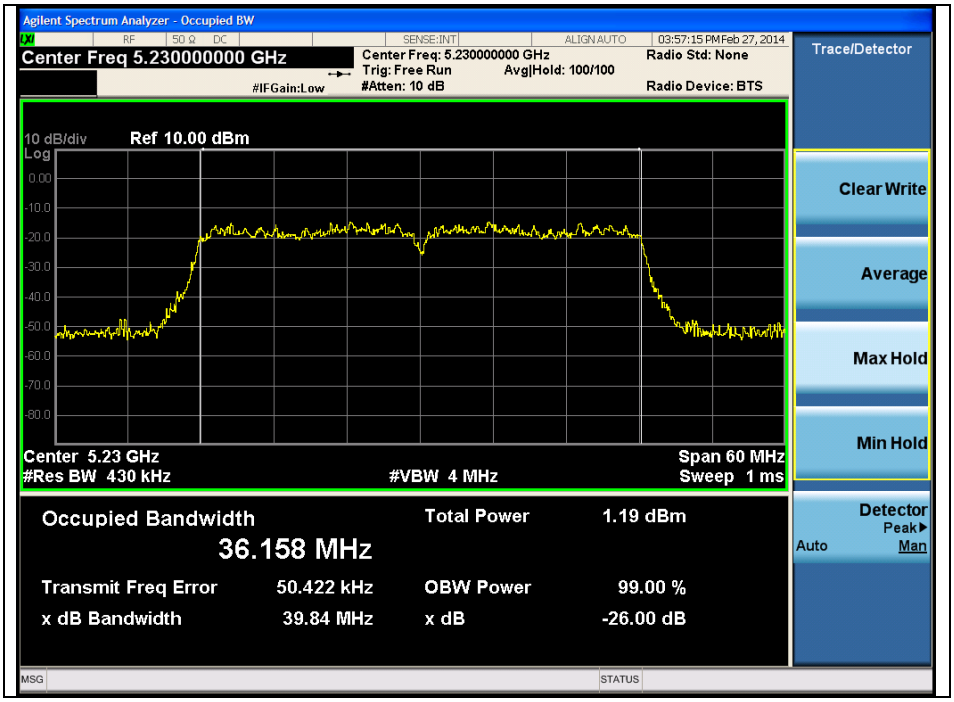


802.11ac_VHT40 (Non-DFS)

Low Channel (5 190 ㎒)



High Channel (5 230 ㎒)



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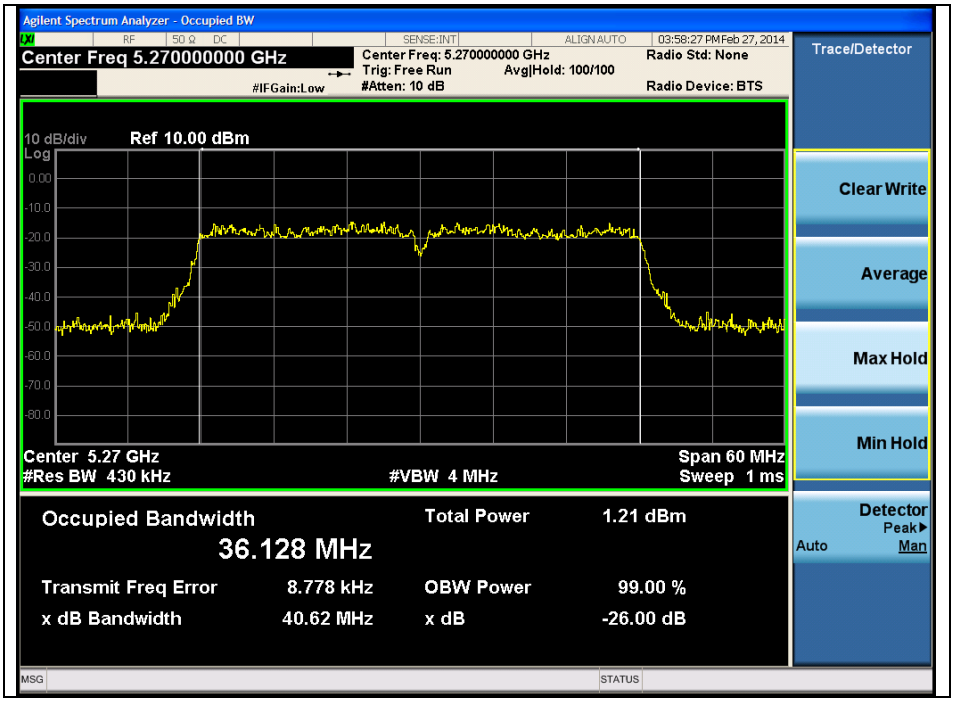
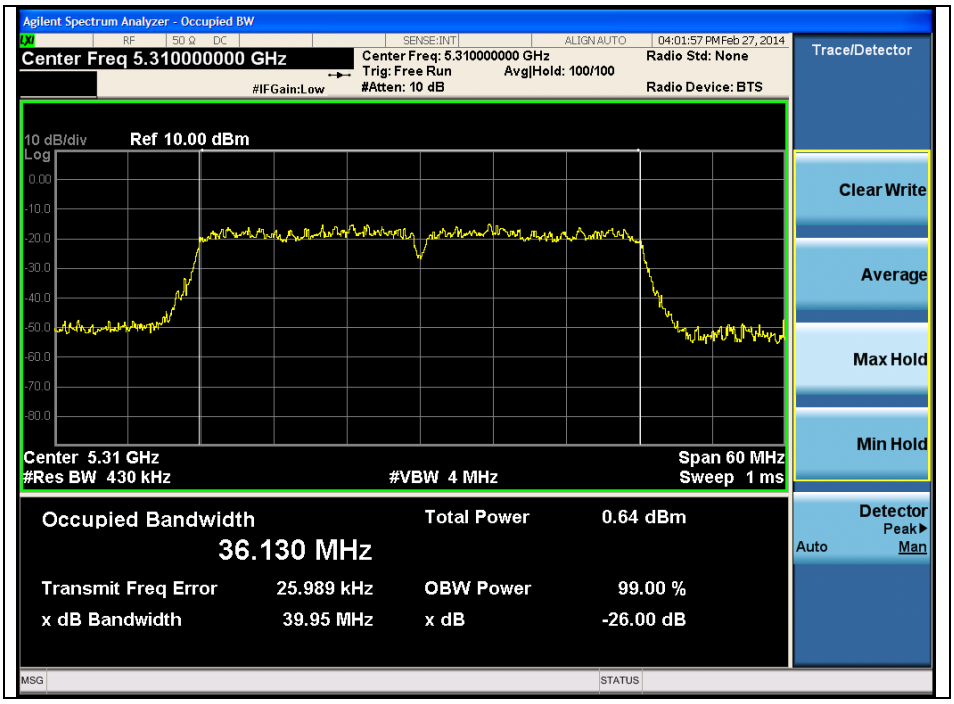
802.11ac_VHT40 (DFS)

Low Channel (5 270 ㎒)

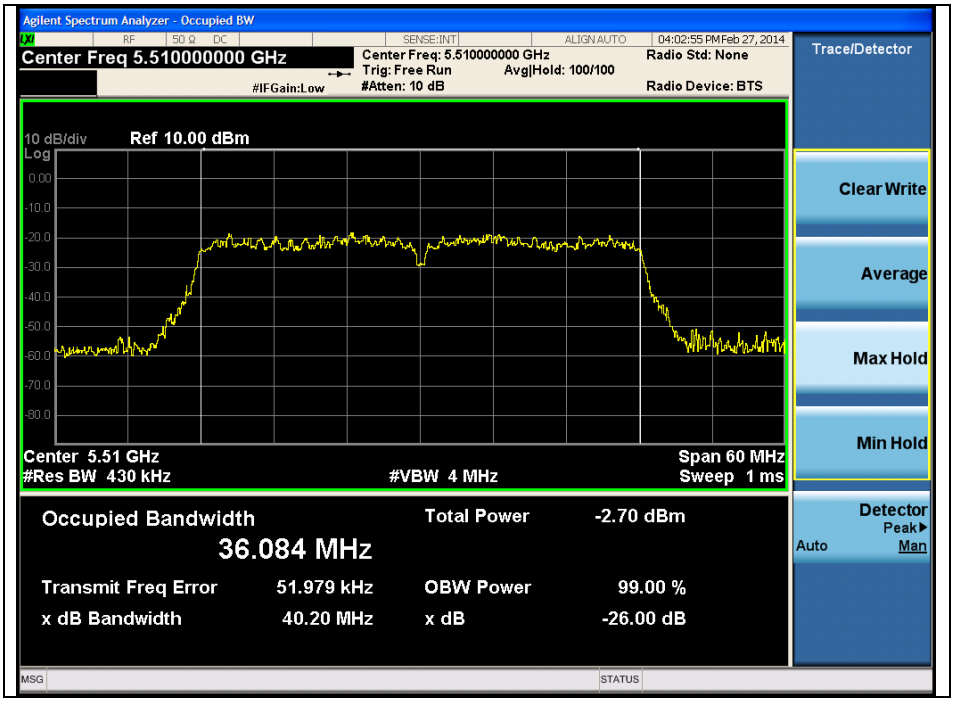


High Channel (5 310 ㎒)

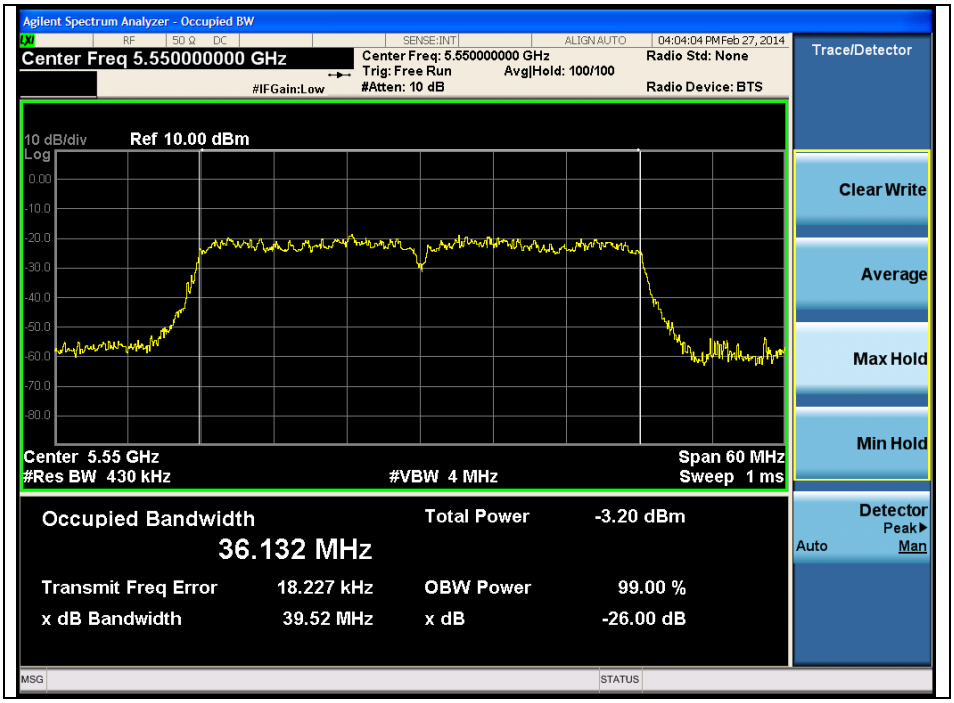


802.11ac_VHT40 (DFS)

Low Channel (5 510 ㎒)



Middle 1 Channel (5 550 ㎒)



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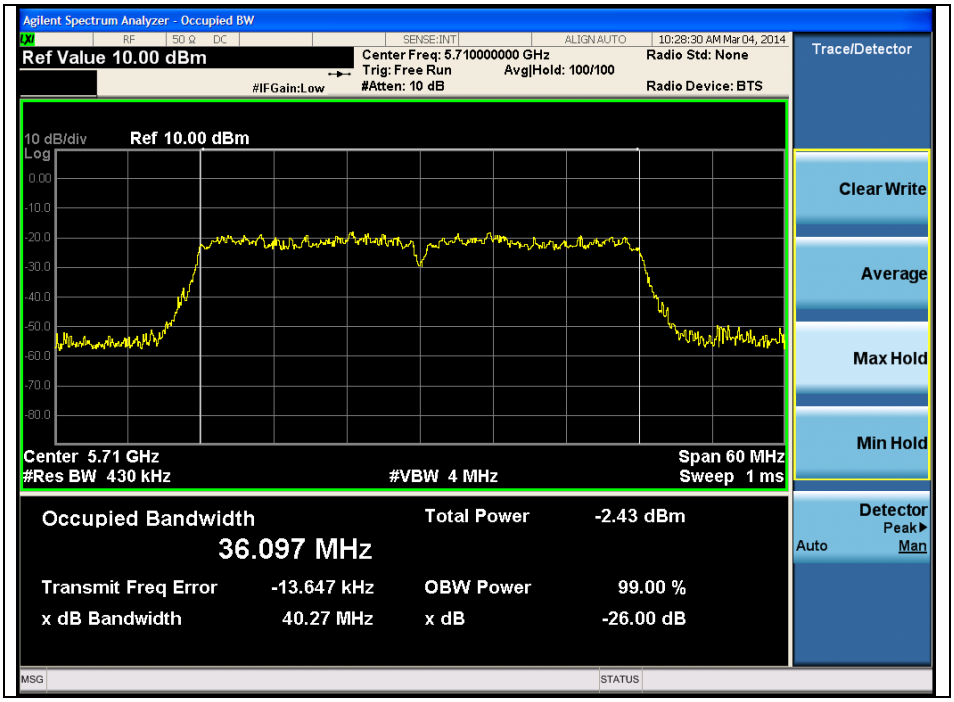
Middle 2 Channel (5 670 ㎒)

High Channel (5 710 ㎒)

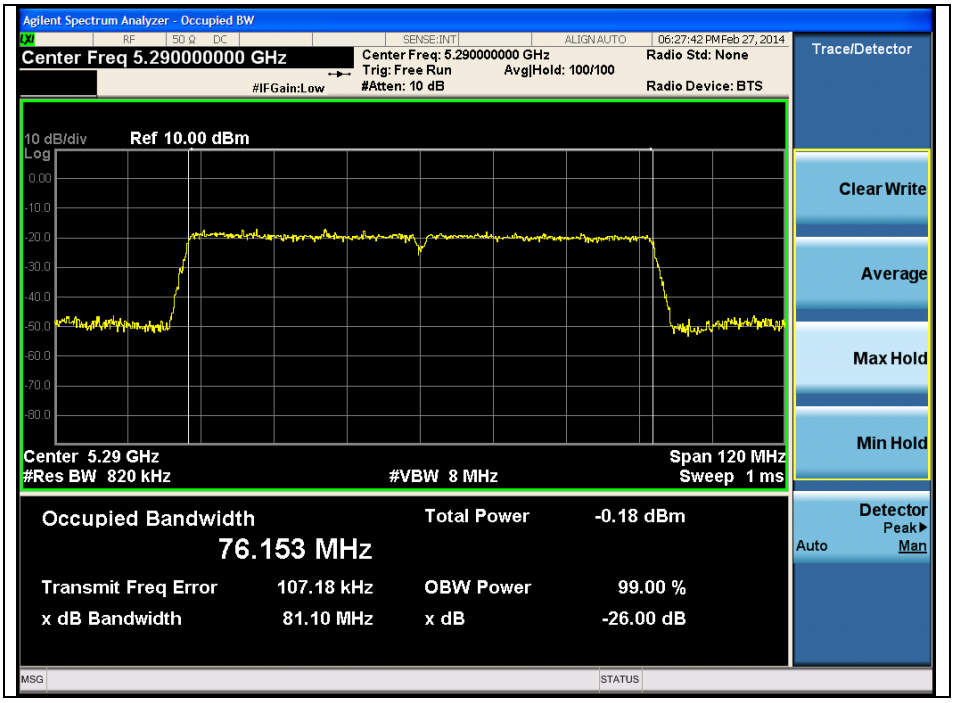


802.11ac_VHT80 (Non-DFS)

Low Channel (5 210 ㎒)

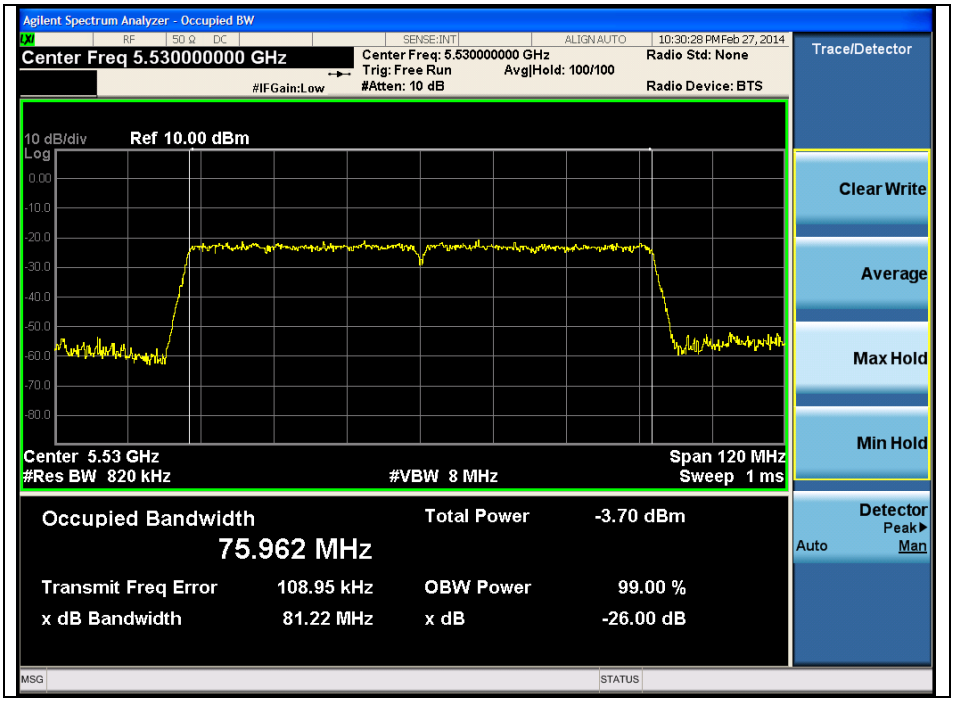
802.11ac_VHT80 (DFS)

Low Channel (5 290 ㎒)

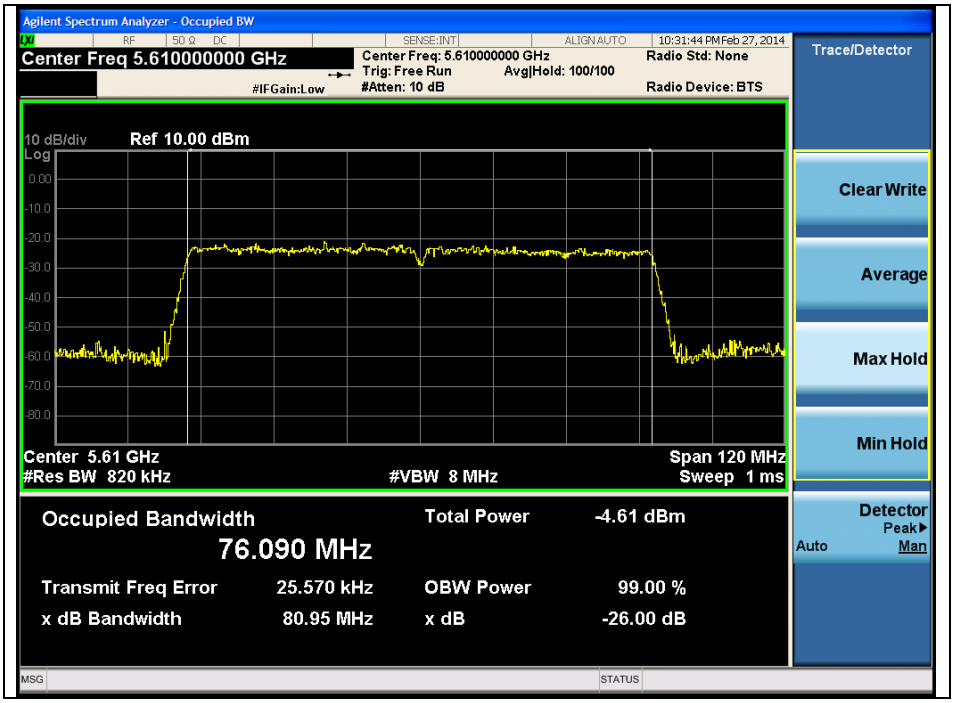
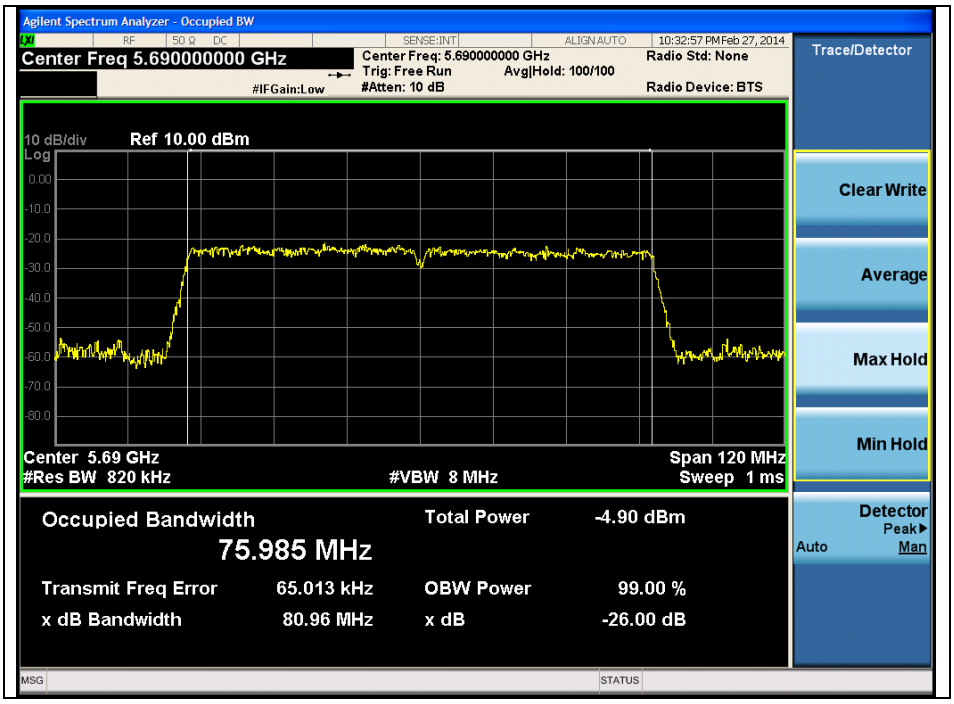


802.11ac_VHT80 (DFS)

Low Channel (5 530 ㎒)



Middle Channel (5 610 ㎒)



High Channel (5 690 ㎒)