TEST REPORT

of

FCC Part 15 Subpart E §15.407

FCC ID : ZNFV32

Equipment Under Test	:	Cellular/PCS GSM/GPRS/EDGE/WCDMA and LTE Phone with Bluetooth, WLAN and RFID
Model Name	:	LGV32
Applicant	:	LG Electronics MobileComm U.S.A., Inc.
Manufacturer	:	LG Electronics MobileComm U.S.A., Inc.
Date of Test(s)	:	2015.03.09 ~ 2015.04.06
Date of Issue	:	2015.04.08

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

Tested By: **Wonjun Sim** **Date:** **2015.04.08**

Approved By: **Hyunchae You** **Date:** **2015.04.08**

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1. General information

1.1 Testing laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)
-Wireless Div. 2FL, 10-2, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 435-837
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.
Phone No. : + 82 31 688 0901
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1.1. Details of Applicant

Applicant : LG Electronics MobileComm U.S.A., Inc.
Address : 10101 Old Grove Road, San Diego, CA 92131
Contact Person : An, Hee-Ju
Phone No. : +82 2 2033 1103

1.3. Description of EUT

Kind of Product	Cellular/PCS GSM/GPRS/EDGE/WCDMA and LTE Phone with Bluetooth, WLAN and RFID
Model Name	LGV32
Power Supply	DC 3.85 V
Frequency Range	5 180 ㎒ ~ 5 240 ㎒ (Band 1: 11a/n_HT20, 11ac_VHT20), 5 190 ㎒ ~ 5 230 ㎒ (Band 1: 11n_HT40, 11ac_VHT40), 5 210 ㎒ (Band 1: 11ac_VHT80), 5 260 ㎒ ~ 5 320 ㎒ (Band 2A: 11a/n_HT20, 11ac_VHT20), 5 270 ㎒ ~ 5 310 ㎒ (Band 2A: 11n_HT40, 11ac_VHT40), 5 290 ㎒ (Band 2A: 11ac_VHT80), 5 500 ㎒ ~ 5 700 ㎒ (Band 2C: 11a/n_HT20) except for TDWR(5.6-5.65 ㎓) band, 5 510 ㎒ ~ 5 670 ㎒ (Band 2C: 11n_HT40) except for TDWR(5.6-5.65 ㎓) band, 5 530 ㎒ (Band 2C: 11ac_VHT80)
Modulation Technique	DSSS, OFDM
Number of Channels	4 channels (Band 1 : 11a/n_HT20,11ac_VHT20), 2 channels (Band 1 : 11n_HT40, 11ac_VHT40), 1 channels (Band 1 : 11ac_VHT80), 4 channels (Band 2A : 11a/n_HT20, 11ac_VHT20), 2 channels (Band 2A : 11n_HT40, 11ac_VHT40), 1 channels (Band 2A : 11ac_VHT80), 8 channels (Band 2C : 11a/n_HT20, 11ac_VHT20), 3 channels (Band 2C : 11n_HT40, 11ac_VHT40), 1 channels (Band 2C : 11ac_VHT80)
Antenna Type	Internal type (SISO)
Antenna Gain	1.01 ㏈i

1.4. Declaration by the manufacturer

- EUT is SLAVE without Radar Detection and TPC.
- EUT is not supported TDWR(5.6 - 5.65 ㎓) band. There is detailed information for channel plans in the operational description.

1.5. Test equipment list

Equipment	Manufacturer	Model	S/N	Cal Date	Cal Interval	Cal Due.
Signal Generator	Agilent	E8257D	MY51501169	Jul. 17, 2014	Annual	Jul. 17, 2015
Spectrum Analyzer	Agilent	N9030A	MY53120526	Jul. 17, 2014	Annual	Jul. 17, 2015
Attenuator	AEROFLEX / WEINSCHEL	89-20-12	407	Jul. 01, 2014	Annual	Jul. 01, 2015
Band Reject Filter	Wainwright	WRCJV5150/5350-5130/ 5370-50/16SS	1	Sep. 24, 2014	Annual	Sep. 24, 2015
Band Reject Filter	Wainwright	WRCJV5470/5725-5450/ 5745-50/20SS	1	Sep. 24, 2014	Annual	Sep. 24, 2015
High Pass Filter	Wainwright	WHK6.0/18G-10SS	11	Jun. 10, 2014	Annual	Jun. 10, 2015
High Pass Filter	Wainwright	WHNX7.5/26.5G-6SS	11	Jun. 10, 2014	Annual	Jun. 10, 2015
Low Pass Filter	Mini circuits	NLP-1200+	V 8979400903-2	Mar. 12, 2015	Annual	Mar. 12, 2016
Power Meter	Anritsu	ML2495A	1223004	Jun. 10, 2014	Annual	Jun. 10, 2015
Power Sensor	Anritsu	MA2411B	1207272	Jun. 10, 2014	Annual	Jun. 10, 2015
DC Power Supply	Agilent	U8002A	MY49030063	Dec. 06, 2014	Annual	Dec. 06, 2015
Preamplifier	H.P.	8447F	2944A03909	Aug. 27, 2014	Annual	Aug. 27, 2015
Preamplifier	R&S	SCU 18	10117	Dec. 16, 2014	Annual	Dec. 16, 2015
Preamplifier	MITEQ Inc.	JS44-18004000-35-8P	1546891	Apr. 28, 2014	Annual	Apr. 28, 2015
Bilog Antenna	SCHWARZBECK MESSELEKTRONIK	VULB9163	396	Jun. 07, 2013	Biennial	Jun. 07, 2015
Loop Antenna	SCHWARZBECK MESSELEKTRONIK	FMZB 1519	1519-039	Jul. 09, 2013	Biennial	Jul. 09, 2015
Horn Antenna	R&S	HF906	100326	Dec. 10, 2013	Biennial	Dec. 10, 2015
Horn Antenna	SCHWARZBECK MESSELEKTRONIK	BBHA9170	BBHA9170431	May 15, 2014	Biennial	May 15, 2016
Antenna Master	INN-CO	MM4000	N/A	N/A	N/A	N.C.R.
Turn Table	INN-CO	DS 1200 S	N/A	N/A	N/A	N.C.R.
Test Receiver	R&S	ESU26	100368	Dec. 16, 2014	Annual	Dec. 16, 2015
Test Receiver	R&S	ESCI 7	100911	Dec. 24, 2014	Annual	Dec. 24, 2015
Two-Line V-Network	R&S	ENV216	100190	Dec. 25, 2014	Annual	Dec. 25, 2015
Anechoic Chamber	SY Corporation	L × W × H (9.6 m × 6.4 m × 6.6 m)	N/A	N/A	N/A	N.C.R.
Shield Room	SY Corporation	L × W × H (6.5 m × 3.5 m × 3.5 m)	N/A	N.C.R.	N/A	N.C.R.

1.6. Summary of test result

The EUT has been tested according to the following specifications:

APPLIED STANDARD:FCC Part15 subpart C, E		
Section in FCC 15	**Test Item**	**Result**
15.205(a) 15.209(a) 15.407(b)(1) 15.407(b)(2) 15.407(b)(3) 15.407(b)(4)	Transmitter radiated spurious emissions	Complied
15.407(a)	26 dB Bandwidth & 99 % Bandwidth	Complied
15.407(a)(1) 15.407(a)(2) 15.407(a)(3)	Output power	Complied
15.407(a)(1) 15.407(a)(2) 15.407(a)(3)	Peak power spectral density	Complied
15.207	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), the guidance provided in KDB 789033 D02 New rules v01 and were used in the measurement of the DUT.
The device was tested to the new UNII rules.

1.8. Sample calculation

Where relevant, the following sample calculation is provided:

1.8.1. Conducted test

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

1.8.2. Radiation test

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

1.9. Test report revision

Revision	Report number	Date of Issue	Description
0	F690501/RF-RTL008587	2015.04.08	Initial

1.10. Duty Cycle of EUT

Regarding to KDB789033 D02 New rules v01, B), the maximum duty cycles of all modes were investigated and set the spectrum analyzer as below
Set RBW ≥ EBW if possible; otherwise, set RBW to the largest available value, Set VBW ≥ RBW. Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100.

Mode	Data Rate							
11a	**6**	**9**	**12**	**18**	**24**	**36**	**48**	**54**
Duty Cycle (%)	95	93	91	86	84	79	71	71
Correction factor (dB)	0.22	0.32	0.41	0.66	0.76	1.02	1.49	1.49
11n_HT20	**MCS0**	**MCS1**	**MCS2**	**MCS3**	**MCS4**	**MCS5**	**MCS6**	**MCS7**
Duty Cycle (%)	95	91	87	84	78	73	71	70
Correction factor (dB)	0.22	0.41	0.60	0.76	1.08	1.37	1.49	1.55
11n_HT40	**MCS0**	**MCS1**	**MCS2**	**MCS3**	**MCS4**	**MCS5**	**MCS6**	**MCS7**
Duty Cycle (%)	90	83	75	70	66	60	58	57
Correction factor (dB)	0.46	0.81	1.25	1.55	1.80	2.22	2.37	2.44
11ac_VHT20	**MCS0**	**MCS1**	**MCS2**	**MCS3**	**MCS4**	**MCS5**	**MCS6**	**MCS7**	**MCS8**
Duty Cycle (%)	95	91	86	84	78	74	71	70	67
Correction factor (dB)	0.22	0.41	0.66	0.76	1.08	1.31	1.49	1.55	1.74
11ac_VHT40	**MCS0**	**MCS1**	**MCS2**	**MCS3**	**MCS4**	**MCS5**	**MCS6**	**MCS7**	**MCS8**	**MCS9**
Duty Cycle (%)	90	83	76	73	66	62	56	57	55	52
Correction factor (dB)	0.46	0.81	1.19	1.37	1.80	2.08	2.52	2.44	2.60	2.84
11ac_VHT80	**MCS0**	**MCS1**	**MCS2**	**MCS3**	**MCS4**	**MCS5**	**MCS6**	**MCS7**	**MCS8**	**MCS9**
Duty Cycle (%)	82	71	64	60	52	50	47	42	44	41
Correction factor (dB)	0.86	1.49	1.94	2.22	2.84	3.01	3.28	3.77	3.57	3.87

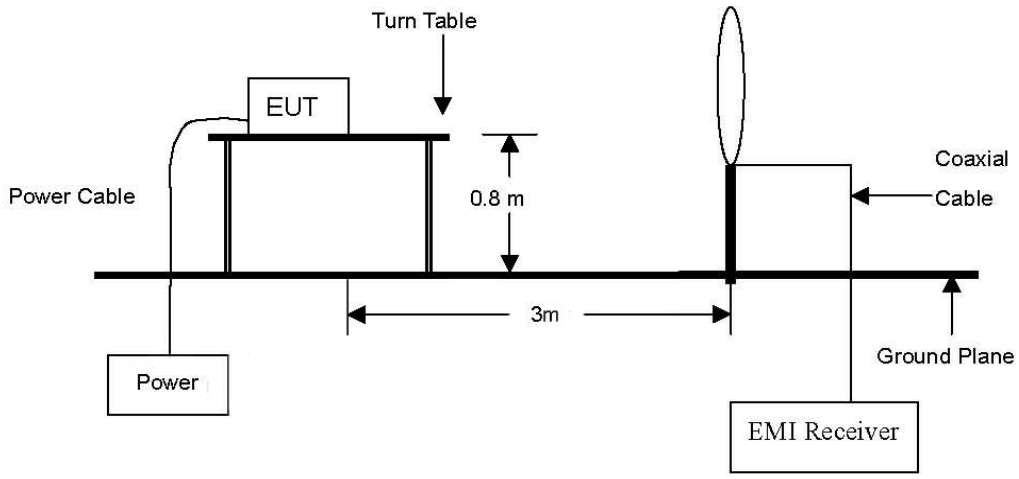
Remark:
1. As measured duty cycles of EUT, all of mode and data rate keep constant period and are converted to log scale (power averaging) to compensate correction factor to result of average test items.
2. Duty cycle (%) = (Tx on time / (Tx on + off time)) x 100
3. Correction factor (dB) = 10 log (1/duty cycle)

2. Transmitter radiated spurious emissions

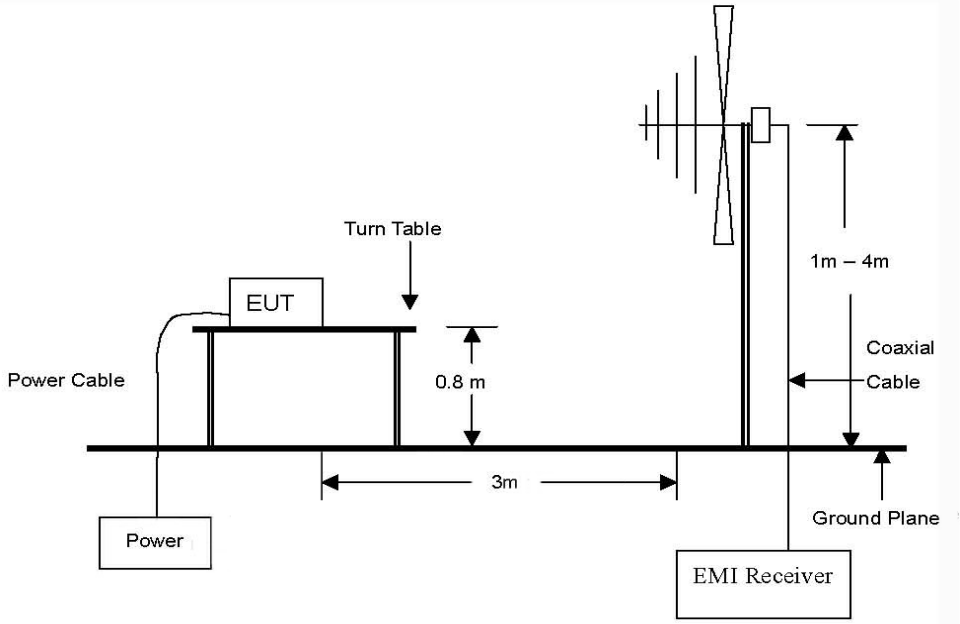
2.1. Test setup

2.1.1. Transmitter Radiated Spurious Emissions

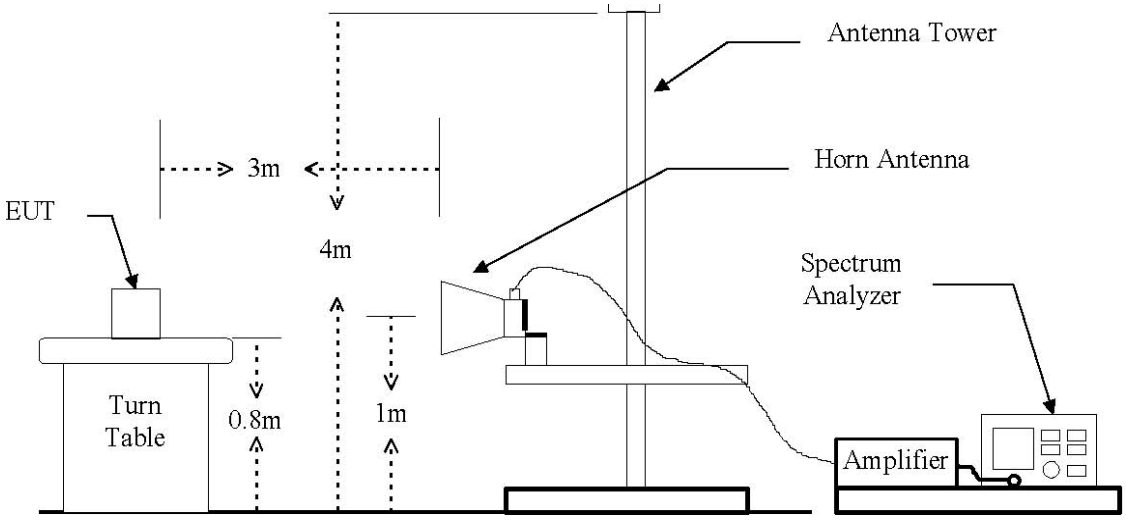
The diagram below shows the test setup that is utilized to make the measurements for emission from 9 ㎑ to 30 ㎒ Emissions.



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

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/㎒.
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.
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)
0.009 – 0.490	300	20 log (2 400/F(㎑))	2 400/F(㎑)
0.490 – 1.705	30	20 log (24 000/F(㎑))	24 000/F(㎑)
1.705 – 30.0	30	29.54	30
30 - 88	3	40.0	100
88 – 216	3	43.5	150
216 – 960	3	46.0	200
Above 960	3	54.0	500

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 ㎒, 76-88 ㎒, 174-216 ㎒ or 470-806 ㎒. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§15.231 and 15.241.

2.3. Test procedures

Radiated spurious emissions from the EUT were measured according to the dictates in section G of KDB 789033 D02 New rules v01 and ANSI C63.4-2003.

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.

2.3. Test procedures for radiated spurious emissions

2.3.1. Test Procedures for emission below 30 ㎒

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. Then antenna is a loop antenna is fixed at one meter above the ground to determine the maximum value of the field strength. Both parallel and perpendicular of the antenna are set to make the measurement.
3. For each suspected emission, the EUT was arranged to its worst case and then the table was turned from 0 degrees to 360 degrees to find the maximum reading.
4. The test-receiver system was set to average or quasi peak detect function and Specified Bandwidth with Maximum Hold Mode.

2.3.2. Test Procedures for emission from above 30 ㎒

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 bi-log antenna, a horn 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 ㎓ refer to section II.G.4.
  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 ㎓ refer to section II.G.5.
  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

- The measurements for above 1 ㎓ refer to section II.G.6.
  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.

Worst orthogonal plan of EUT is **X – axis** during radiation test.

2.4. Test result

Ambient temperature : (23 ± 1) ℃
Relative humidity : 47 % R.H.

2.4.1. Spurious radiated emission

The frequency spectrum from 9 ㎑ to 1 000 ㎒ was investigated. All reading values are applied for peak values per frequency band.

Radiated Emissions			Ant.	Correction Factors		Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP + CL (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
42.21	34.23	Peak	H	16.00	-26.93	23.30	40.00	16.70
53.60	33.31	Peak	H	15.41	-26.82	21.90	40.00	18.10
103.48	34.01	Peak	H	14.14	-26.25	21.90	43.50	21.60
187.46	33.82	Peak	H	10.93	-25.45	19.30	43.50	24.20
319.99	33.36	Peak	V	15.68	-24.64	24.40	46.00	21.60
760.33	33.78	Peak	V	22.44	-24.42	31.80	46.00	14.20
Above 800.00	Not detected	-	-	-	-	-	-	-

Remark:

1. Spurious emissions for all channels and modes were investigated and almost the same below 1 ㎓.
2. Reported spurious emissions are in **11a / 6 Mbps / 36 channels** as worst case among other modes.
3. Radiated spurious emission measurement as below
   (Actual = Reading + AF + AMP + CL)

2.4.2. Spurious radiated emission for above 1 ㎓

802.11a (Band 1) _6 Mbps

A. Low Channel (5 180 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*4 500.00	11.88	Peak	H	32.20	8.67	-	52.75	74.00	21.25
*4 500.00	0.86	Average	H	32.20	8.67	0.22	41.95	54.00	12.05
*5 149.35	13.96	Peak	H	33.43	9.32	-	56.71	74.00	17.29
*5 149.35	3.79	Average	H	33.43	9.32	0.22	46.76	54.00	7.24
*5 150.00	13.25	Peak	H	33.43	9.32	-	56.00	74.00	18.00
*5 150.00	3.27	Average	H	33.43	9.32	0.22	46.24	54.00	7.76

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 368.12	37.16	Peak	H	37.76	-28.92	-	46.00	68.23	22.23
Above 10 400.00	Not detected	-	-	-	-	-	-	-	-

B. Middle Channel (5 220 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 438.78	34.92	Peak	H	37.66	-29.03	-	43.55	68.23	24.68
Above 10 500.00	Not detected	-	-	-	-	-	-	-	-

C. High Channel (5 240 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 478.95	36.39	Peak	H	37.66	-29.05	-	45.00	68.23	23.23
Above 10 500.00	Not detected	-	-	-	-	-	-	-	-

802.11a (Band 2A) _6 Mbps

A. Low Channel (5 260 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 519.10	36.74	Peak	H	37.66	-28.97	-	45.43	68.23	22.80
Above 10 600.00	Not detected	-	-	-	-	-	-	-	-

B. Middle Channel (5 300 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*10 601.08	37.23	Peak	H	37.78	-28.54	-	46.47	74.00	27.53
*10 601.08	25.64	Average	H	37.78	-28.54	0.22	35.10	54.00	18.90
Above 10 700.00	Not detected	-	-	-	-	-	-	-	-

C. High Channel (5 320 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*5 350.00	11.85	Peak	H	33.75	9.32	-	54.92	74.00	19.08
*5 350.00	2.32	Average	H	33.75	9.32	0.22	45.61	54.00	8.39
*5 377.72	14.12	Peak	H	33.86	9.43	-	57.41	74.00	16.59
*5 377.72	2.80	Average	H	33.86	9.43	0.22	46.31	54.00	7.69
*5 460.00	10.86	Peak	H	34.29	9.12	-	54.27	74.00	19.73
*5 460.00	1.57	Average	H	34.29	9.12	0.22	45.20	54.00	8.80

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*10 638.41	37.05	Peak	H	37.83	-28.32	-	46.56	74.00	27.44
*10 640.13	25.72	Average	H	37.83	-28.32	0.22	35.45	54.00	18.55
Above 10 700.00	Not detected	-	-	-	-	-	-	-	-

802.11a (Band 2C) _6 Mbps

A. Low Channel (5 500 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*5 350.00	11.48	Peak	H	33.75	9.32	-	54.55	74.00	19.45
*5 350.00	1.38	Average	H	33.75	9.32	0.22	44.67	54.00	9.33
*5 445.37	12.84	Peak	H	34.17	9.10	-	56.11	74.00	17.89
*5 445.37	2.61	Average	H	34.17	9.10	0.22	46.10	54.00	7.90
*5 460.00	10.47	Peak	H	34.29	9.12	-	53.88	74.00	20.12
*5 460.00	1.88	Average	H	34.29	9.12	0.22	45.51	54.00	8.49

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*11 005.41	35.99	Peak	H	38.21	-27.14	-	47.06	74.00	26.94
*11 005.41	25.14	Average	H	38.21	-27.14	0.22	36.43	54.00	17.57
Above 11 100.00	Not detected	-	-	-	-	-	-	-	-

B. Middle Channel (5 580 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*11 160.53	36.26	Peak	H	38.18	-28.31	-	46.13	74.00	27.87
*11 160.53	24.43	Average	H	38.18	-28.31	0.22	34.52	54.00	19.48
Above 11 200.00	Not detected	-	-	-	-	-	-	-	-

C. High Channel (5 700 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*11 402.34	36.14	Peak	H	38.25	-28.36	-	46.03	74.00	27.97
*11 402.34	23.31	Average	H	38.25	-28.36	0.22	33.42	54.00	20.58
Above 11 500.00	Not detected	-	-	-	-	-	-	-	-

802.11n_HT20 (Band 1)_MCS0

A. Low Channel (5 180 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*4 500.00	11.76	Peak	H	32.20	8.67	-	52.63	74.00	21.37
*4 500.00	0.91	Average	H	32.20	8.67	0.22	42.00	54.00	12.00
*5 135.70	13.99	Peak	H	33.38	9.21	-	56.58	74.00	17.42
*5 135.70	3.84	Average	H	33.38	9.21	0.22	46.65	54.00	7.35
*5 150.00	13.14	Peak	H	33.43	9.32	-	55.89	74.00	18.11
*5 150.00	3.27	Average	H	33.43	9.32	0.22	46.24	54.00	7.76

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 356.88	36.90	Peak	H	37.73	-28.88	-	45.75	68.23	22.48
Above 10 400.00	Not detected	-	-	-	-	-	-	-	-

B. Middle Channel (5 220 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 443.44	36.29	Peak	H	37.67	-29.04	-	44.92	68.23	23.31
Above 10 500.00	Not detected	-	-	-	-	-	-	-	-

C. High Channel (5 240 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 478.50	37.29	Peak	H	37.66	-29.05	-	45.90	68.23	22.33
Above 10 500.00	Not detected	-	-	-	-	-	-	-	-

802. 11n_HT20 (Band 2A)_MCS0

A. Low Channel (5 260 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 519.89	36.72	Peak	H	37.66	-28.96	-	45.42	68.23	22.81
Above 10 600.00	Not detected	-	-	-	-	-	-	-	-

B. Middle Channel (5 300 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*10 601.96	37.24	Peak	H	37.78	-28.54	-	46.48	74.00	27.52
*10 601.96	25.79	Peak	H	37.78	-28.54	0.22	35.25	54.00	18.75
Above 10 700.00	Not detected	-	-	-	-	-	-	-	-

C. High Channel (5 320 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*5 350.00	11.88	Peak	H	33.75	9.32	-	54.95	74.00	19.05
*5 350.00	2.32	Average	H	33.75	9.32	0.22	45.61	54.00	8.39
*5 357.92	13.95	Peak	H	33.77	9.35	-	57.07	74.00	16.93
*5 357.92	2.70	Average	H	33.77	9.35	0.22	46.04	54.00	7.96
*5 460.00	10.84	Peak	H	34.29	9.12	-	54.25	74.00	19.75
*5 460.00	1.68	Average	H	34.29	9.12	0.22	45.31	54.00	8.69

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*10 641.48	36.67	Peak	H	37.83	-28.30	-	46.20	74.00	27.80
*10 641.48	24.71	Average	H	37.83	-28.30	0.22	34.46	54.00	19.54
Above 10 700.00	Not detected	-	-	-	-	-	-	-	-

802. 11n_HT20 (Band 2C)_MCS0

A. Low Channel (5 500 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*5 350.00	11.35	Peak	H	33.75	9.32	-	54.42	74.00	19.58
*5 350.00	1.42	Average	H	33.75	9.32	0.22	44.71	54.00	9.29
*5 380.03	12.87	Peak	H	33.87	9.43	-	56.17	74.00	17.83
*5 380.03	2.57	Average	H	33.87	9.43	0.22	46.09	54.00	7.91
*5 460.00	10.59	Peak	H	34.29	9.12	-	54.00	74.00	20.00
*5 460.00	1.74	Average	H	34.29	9.12	0.22	45.37	54.00	8.63

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*10 996.66	37.20	Peak	H	38.22	-27.12	-	48.30	74.00	25.70
*10 996.66	24.16	Average	H	38.22	-27.12	0.22	35.48	54.00	18.52
Above 11 000.00	Not detected	-	-	-	-	-	-	-	-

B. Middle Channel (5 580 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*11 154.30	36.24	Peak	H	38.19	-28.24	-	46.19	74.00	27.81
*11 154.30	24.46	Average	H	38.19	-28.24	0.22	34.63	54.00	19.37
Above 11 200.00	Not detected	-	-	-	-	-	-	-	-

C. High Channel (5 700 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*11 404.18	36.39	Peak	H	38.25	-28.37	-	46.27	74.00	27.73
*11 404.18	24.53	Average	H	38.25	-28.37	0.22	34.63	54.00	19.37
Above 11 500.00	Not detected	-	-	-	-	-	-	-	-

802.11n_HT40 (Band 1) _MCS0

A. Low Channel (5 190 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*4 500.00	10.58	Peak	H	32.20	8.67	-	51.45	74.00	22.55
*4 500.00	1.28	Average	H	32.20	8.67	0.46	42.61	54.00	11.39
*5 145.45	13.51	Peak	H	33.42	9.29	-	56.22	74.00	17.78
*5 145.45	3.16	Average	H	33.42	9.29	0.46	46.33	54.00	7.67
*5 150.00	11.53	Peak	H	33.43	9.32	-	54.28	74.00	19.72
*5 150.00	2.33	Average	H	33.43	9.32	0.46	45.54	54.00	8.46

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 382.71	37.50	Peak	H	37.72	-28.96	-	46.26	68.23	21.97
Above 10 400.00	Not detected	-	-	-	-	-	-	-	-

B. High Channel (5 230 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 459.82	37.04	Peak	H	37.70	-29.05	-	45.69	68.23	22.54
Above 10 500.00	Not detected	-	-	-	-	-	-	-	-

802. 11n_HT40 (Band 2A)_MCS0

A. Low Channel (5 270 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 537.57	36.37	Peak	H	37.71	-28.87	-	45.21	68.23	23.02
Above 10 600.00	Not detected	-	-	-	-	-	-	-	-

B. High Channel (5 310 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*5 350.00	12.73	Peak	H	33.75	9.32	-	55.80	74.00	18.20
*5 350.00	3.58	Average	H	33.75	9.32	0.46	47.11	54.00	6.89
*5 459.89	15.16	Peak	H	34.29	9.12	-	58.57	74.00	15.43
*5 459.89	4.13	Average	H	34.29	9.12	0.46	48.00	54.00	6.00
*5 460.00	11.27	Peak	H	34.29	9.12	-	54.68	74.00	19.32
*5 460.00	1.84	Average	H	34.29	9.12	0.46	45.71	54.00	8.29

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*10 617.24	36.64	Peak	H	37.80	-28.45	-	45.99	74.00	28.01
*10 617.24	23.32	Average	H	37.80	-28.45	0.46	33.13	54.00	20.87
Above 10 700.00	Not detected	-	-	-	-	-	-	-	-

802. 11n_HT40 (Band 2C)_MCS0

A. Low Channel (5 510 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*5 350.00	10.39	Peak	H	33.75	9.32	-	53.46	74.00	20.54
*5 350.00	1.90	Average	H	33.75	9.32	0.46	45.43	54.00	8.57
*5 459.89	14.13	Peak	H	34.29	9.12	-	57.54	74.00	16.46
*5 459.89	2.78	Average	H	34.29	9.12	0.46	46.65	54.00	7.35
*5 460.00	11.38	Peak	H	34.29	9.12	-	54.79	74.00	19.21
*5 460.00	2.41	Average	H	34.29	9.12	0.46	46.28	54.00	7.72

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*11 015.51	35.32	Peak	H	38.24	-27.19	-	46.37	74.00	27.63
*11 015.51	23.76	Average	H	38.24	-27.19	0.46	35.27	54.00	18.73
Above 11 100.00	Not detected	-	-	-	-	-	-	-	-

B. Middle Channel (5 550 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*11 097.83	35.84	Peak	H	38.20	-27.56	-	46.48	74.00	27.52
*11 097.83	24.34	Average	H	38.20	-27.56	0.46	35.44	54.00	18.56
Above 11 100.00	Not detected	-	-	-	-	-	-	-	-

C. High Channel (5 670 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*11 342.34	35.48	Peak	H	38.26	-28.86	-	44.88	74.00	29.12
*11 342.35	22.88	Average	H	38.26	-28.86	0.46	32.74	54.00	21.26
Above 11 400.00	Not detected	-	-	-	-	-	-	-	-

802.11ac_VHT20 (Band 1)_MCS0

A. Low Channel (5 180 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*4 500.00	11.89	Peak	H	32.20	8.67	-	52.76	74.00	21.24
*4 500.00	0.94	Average	H	32.20	8.67	0.22	42.03	54.00	11.97
*5 118.80	13.91	Peak	H	33.29	9.08	-	56.28	74.00	17.72
*5 118.80	3.79	Average	H	33.29	9.08	0.22	46.38	54.00	7.62
*5 150.00	13.25	Peak	H	33.43	9.32	-	56.00	74.00	18.00
*5 150.00	3.08	Average	H	33.43	9.32	0.22	46.05	54.00	7.95

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 355.74	36.49	Peak	H	37.73	-28.88	-	45.34	68.23	22.89
Above 10 400.00	Not detected	-	-	-	-	-	-	-	-

B. Middle Channel (5 220 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 441.28	36.07	Peak	H	37.66	-29.03	-	44.70	68.23	23.53
Above 10 500.00	Not detected	-	-	-	-	-	-	-	-

C. High Channel (5 240 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 483.04	37.26	Peak	H	37.67	-29.05	-	45.88	68.23	22.35
Above 10 500.00	Not detected	-	-	-	-	-	-	-	-

802. 11ac_VHT20 (Band 2A)_MCS0

A. Low Channel (5 260 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 522.34	36.41	Peak	H	37.66	-28.95	-	45.12	68.23	23.11
Above 10 600.00	Not detected	-	-	-	-	-	-	-	-

B. Middle Channel (5 300 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 599.78	38.76	Peak	H	37.78	-28.55	-	47.99	68.23	20.24
Above 10 600.00	Not detected	-	-	-	-	-	-	-	-

C. High Channel (5 320 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*5 350.00	11.75	Peak	H	33.75	9.32	-	54.82	74.00	19.18
*5 350.00	2.45	Average	H	33.75	9.32	0.22	45.74	54.00	8.26
*5 406.10	14.04	Peak	H	33.96	9.46	-	57.46	74.00	16.54
*5 406.10	2.83	Average	H	33.96	9.46	0.22	46.47	54.00	7.53
*5 460.00	10.79	Peak	H	34.29	9.12	-	54.20	74.00	19.80
*5 460.00	1.69	Average	H	34.29	9.12	0.22	45.32	54.00	8.68

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*10 637.18	37.15	Peak	H	37.82	-28.33	-	46.64	74.00	27.36
*10 637.18	24.80	Average	H	37.82	-28.33	0.22	34.51	54.00	19.49
Above 10 700.00	Not detected	-	-	-	-	-	-	-	-

802. 11ac_VHT20 (Band 2C)_MCS0

A. Low Channel (5 500 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*5 350.00	11.56	Peak	H	33.75	9.32	-	54.63	74.00	19.37
*5 350.00	1.27	Average	H	33.75	9.32	0.22	44.56	54.00	9.44
*5 388.28	12.87	Peak	H	33.88	9.47	-	56.22	74.00	17.78
*5 388.28	2.51	Average	H	33.88	9.47	0.22	46.08	54.00	7.92
*5 460.00	10.32	Peak	H	34.29	9.12	-	53.73	74.00	20.27
*5 460.00	1.86	Average	H	34.29	9.12	0.22	45.49	54.00	8.51

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*11 002.10	35.63	Peak	H	38.20	-27.13	-	46.70	74.00	27.30
*11 002.10	24.33	Average	H	38.20	-27.13	0.22	35.62	54.00	18.38
Above 11 100.00	Not detected	-	-	-	-	-	-	-	-

B. Middle Channel (5 580 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*11 165.19	36.68	Peak	H	38.16	-28.37	-	46.47	74.00	27.53
*11 165.19	25.02	Average	H	38.16	-28.37	0.22	35.03	54.00	18.97
Above 11 200.00	Not detected	-	-	-	-	-	-	-	-

C. High Channel (5 700 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*11 403.35	36.14	Peak	H	38.25	-28.37	-	46.02	74.00	27.98
*11 403.35	25.11	Average	H	38.25	-28.37	0.22	35.21	54.00	18.79
Above 11 500.00	Not detected	-	-	-	-	-	-	-	-

802.11ac_VHT40 (Band 1) _MCS0

A. Low Channel (5 190 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*4 500.00	10.59	Peak	H	32.20	8.67	-	51.46	74.00	22.54
*4 500.00	1.21	Average	H	32.20	8.67	0.46	42.54	54.00	11.46
*5 146.10	13.45	Peak	H	33.42	9.29	-	56.16	74.00	17.84
*5 146.10	3.25	Average	H	33.42	9.29	0.46	46.42	54.00	7.58
*5 150.00	11.50	Peak	H	33.43	9.32	-	54.25	74.00	19.75
*5 150.00	2.19	Average	H	33.43	9.32	0.46	45.40	54.00	8.60

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 382.68	36.56	Peak	H	37.72	-28.96	-	45.32	68.23	22.91
Above 10 400.00	Not detected	-	-	-	-	-	-	-	-

B. High Channel (5 230 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 458.75	35.85	Peak	H	37.70	-29.05	-	45.50	68.23	22.73
Above 10 500.00	Not detected	-	-	-	-	-	-	-	-

802.11ac_VHT40 (Band 2A)_MCS0

A. Low Channel (5 270 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 536.70	36.60	Peak	H	37.71	-28.87	-	45.44	68.23	22.79
Above 10 600.00	Not detected	-	-	-	-	-	-	-	-

B. High Channel (5 310 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*5 350.00	12.73	Peak	H	33.75	9.32	-	55.80	74.00	18.20
*5 350.00	3.51	Average	H	33.75	9.32	0.46	47.04	54.00	6.96
*5 444.71	15.15	Peak	H	34.17	9.11	-	58.43	74.00	15.57
*5 444.71	4.20	Average	H	34.17	9.11	0.46	47.94	54.00	6.06
*5 460.00	11.12	Peak	H	34.29	9.12	-	54.53	74.00	19.47
*5 460.00	1.92	Average	H	34.29	9.12	0.46	45.79	54.00	8.21

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*10 618.48	36.47	Peak	H	37.81	-28.44	-	45.84	74.00	28.16
*10 618.48	25.37	Average	H	37.81	-28.44	0.46	35.20	54.00	18.80
Above 10 700.00	Not detected	-	-	-	-	-	-	-	-

802.11ac_VHT40 (Band 2C)_MCS0

A. Low Channel (5 510 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*5 350.00	10.48	Peak	H	33.75	9.32	-	53.55	74.00	20.45
*5 350.00	2.03	Average	H	33.75	9.32	0.46	45.56	54.00	8.44
*5 443.61	14.22	Peak	H	34.16	9.12	-	57.50	74.00	16.50
*5 443.61	2.88	Average	H	34.16	9.12	0.46	46.62	54.00	7.38
*5 460.00	11.46	Peak	H	34.29	9.12	-	54.87	74.00	19.13
*5 460.00	2.26	Average	H	34.29	9.12	0.46	46.13	54.00	7.87

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*11 017.94	35.72	Peak	H	38.25	-27.20	-	46.77	74.00	27.23
*11 017.94	23.46	Average	H	38.25	-27.20	0.46	34.97	54.00	19.03
Above 11 100.00	Not detected	-	-	-	-	-	-	-	-

B. Middle Channel (5 550 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*11 096.51	37.13	Peak	H	38.20	-27.55	-	47.78	74.00	26.22
*11 096.51	24.46	Average	H	38.20	-27.55	0.46	35.57	54.00	18.43
Above 11 100.00	Not detected	-	-	-	-	-	-	-	-

C. High Channel (5 670 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*11 332.60	34.63	Peak	H	38.20	-28.95	-	43.88	74.00	30.12
*11 332.60	22.87	Average	H	38.20	-28.95	0.46	32.58	54.00	21.42
Above 11 400.00	Not detected	-	-	-	-	-	-	-	-

802.11ac_VHT80 (Band 1)_MCS0

A. Middle Channel (5 210 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*4 500.00	10.72	Peak	H	32.20	8.67	-	51.59	74.00	22.41
*4 500.00	0.61	Average	H	32.20	8.67	0.86	42.34	54.00	11.66
*4 561.10	13.92	Peak	H	31.50	8.89	-	54.31	74.00	19.69
*4 561.10	3.54	Average	H	31.50	8.89	0.86	44.79	54.00	9.21
*5 150.00	11.13	Peak	H	33.43	9.32	-	53.88	74.00	20.12
*5 150.00	2.43	Average	H	33.43	9.32	0.86	46.04	54.00	7.96

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 421.38	36.78	Peak	H	37.70	-29.03	-	45.45	68.23	22.78
Above 10 500.00	Not detected	-	-	-	-	-	-	-	-

802. 11ac_VHT80 (Band 2A)_MCS0

A. Middle Channel (5 290 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*5 350.00	11.98	Peak	H	33.75	9.32	-	55.05	74.00	18.95
*5 350.00	1.00	Average	H	33.75	9.32	0.86	44.93	54.00	9.07
*5 370.57	14.28	Peak	H	33.82	9.40	-	57.50	74.00	16.50
*5 370.57	2.48	Average	H	33.82	9.40	0.86	46.56	54.00	7.44
*5 460.00	12.22	Peak	H	34.29	9.12	-	55.63	74.00	18.37
*5 460.00	1.46	Average	H	34.29	9.12	0.86	45.73	54.00	8.27

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL(dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
10 578.55	37.19	Peak	H	37.76	-28.66	-	46.29	68.23	21.94
Above 10 600.00	Not detected	-	-	-	-	-	-	-	-

802. 11ac_VHT80 (Band 2C)_MCS0

A. Middle Channel (5 530 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*5 350.00	10.41	Peak	H	33.75	9.32	-	53.48	74.00	20.52
*5 350.00	1.55	Average	H	33.75	9.32	0.86	45.48	54.00	8.52
*5 413.14	13.67	Peak	H	34.03	9.39	-	57.09	74.00	16.91
*5 413.14	2.92	Average	H	34.03	9.39	0.86	47.20	54.00	6.80
*5 460.00	9.80	Peak	H	34.29	9.12	-	53.21	74.00	20.79
*5 460.00	2.03	Average	H	34.29	9.12	0.86	46.30	54.00	7.70

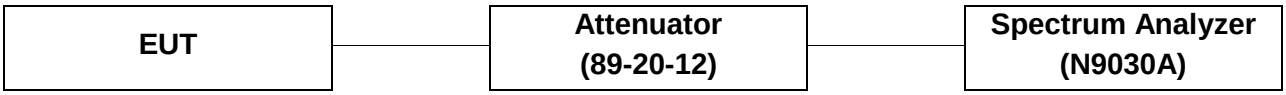
Radiated Emissions			Ant.	Correction Factors			Total	FCC Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+ CL (dB)	Duty (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*11 053.91	36.00	Peak	H	38.23	-27.36	-	46.87	74.00	27.13
*11 053.91	24.51	Average	H	38.23	-27.37	0.86	36.23	54.00	17.77
Above 11 100.00	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 out of restricted band, only peak detector should be used.
3. Band edge measurement
   (Actual = Reading + AF + CL + Duty cycle)
4. Radiated spurious emission measurement
   (Actual = Reading + AF + AMP + CL + Duty cycle)
5. If frequency was out of restricted band, the calculation method for peak limit is same as below:
   68.23 dB㎶/m = EIRP - 20 log(d) + 104.77 = -27 - 20 log (3) + 104.77
   *distance : 3 m, *EIRP : -27 dB m/㎒

3. 26 ㏈ Bandwidth & 99 % Bandwidth

3.1. Test setup



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 ㏈ Bandwidth

1. This measurement settings are specified in section C) of KDB 789033 D02 New rules v01.
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 ㏈ 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 %

3.3.2. 99 % Bandwidth

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW ≥ 3 · RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99 % occupied bandwidth is the difference between these two frequencies.

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

In the result,

- DFS requirements are not applicable in the 5 150 ㎒ - 5 250 ㎒
- No emission is within the 5 600 ㎒ - 5 650 ㎒ TDWR band

3.4. Test result

Ambient temperature : (23 ± 1) ℃
Relative humidity : 47 % R.H.

3.4.1. 26 dB Bandwidth & 99 % Bandwidth

Band	Mode	Frequency (㎒)	Ch.	Data Rate	26 dB Bandwidth (㎒)	99% Bandwidth (㎒)
U-NII 1	11a	5 180	36	6	21.39	16.79
		5 220	44	6	21.60	16.83
		5 240	48	6	21.59	16.76
	11n_HT20	5 180	36	MCS0	21.46	17.90
		5 220	44	MCS0	21.60	17.94
		5 240	48	MCS0	21.63	17.93
	11n_HT40	5 190	38	MCS0	39.70	36.36
		5 230	46	MCS0	40.24	36.38
	11ac_VHT20	5 180	36	MCS0	21.44	17.94
		5 220	44	MCS0	21.79	18.00
		5 240	48	MCS0	21.61	17.95
	11ac_VHT40	5 190	38	MCS0	40.42	36.41
		5 230	46	MCS0	40.28	36.39
	11ac_VHT80	5 210	42	MCS0	82.22	75.99
U-NII 2A	11a	5 260	52	6	21.55	16.81
		5 300	60	6	21.57	16.84
		5 320	64	6	21.62	16.82
	11n_HT20	5 260	52	MCS0	21.86	17.96
		5 300	60	MCS0	21.74	17.91
		5 320	64	MCS0	21.69	17.94
	11n_HT40	5 270	54	MCS0	40.23	36.30
		5 310	62	MCS0	40.30	36.40
	11ac_VHT20	5 260	52	MCS0	21.85	17.91
		5 300	60	MCS0	21.67	17.95
		5 320	64	MCS0	21.56	17.97
	11ac_VHT40	5 270	54	MCS0	39.66	36.31
		5 310	62	MCS0	40.04	36.41
	11ac_VHT80	5 290	58	MCS0	81.95	75.77

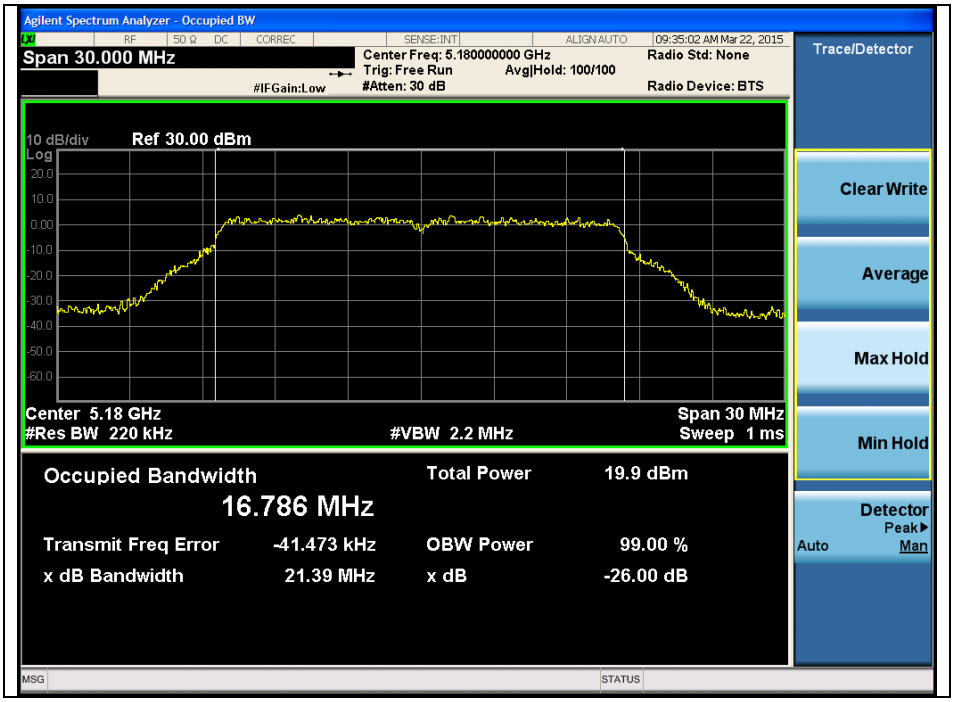
-26 dB Bandwidth & 99 % Bandwidth

U-NII 2C	11a	5 500	100	6	21.64	16.85
		5 580	116	6	21.49	16.84
		5 700	140	6	21.50	16.77
	11n_HT20	5 500	100	MCS0	21.68	17.97
		5 580	116	MCS0	21.79	17.93
		5 700	140	MCS0	22.00	17.97
	11n_HT40	5 510	102	MCS0	39.97	36.40
		5 550	110	MCS0	40.02	36.39
		5 670	134	MCS0	40.00	36.37
	11ac_VHT20	5 500	100	MCS0	21.60	17.97
		5 580	116	MCS0	21.81	17.98
		5 700	140	MCS0	21.82	17.95
	11ac_VHT40	5 510	102	MCS0	40.23	36.37
		5 550	110	MCS0	40.46	36.38
		5 670	134	MCS0	39.80	36.38
	11ac_VHT80	5 530	106	MCS0	82.34	75.80

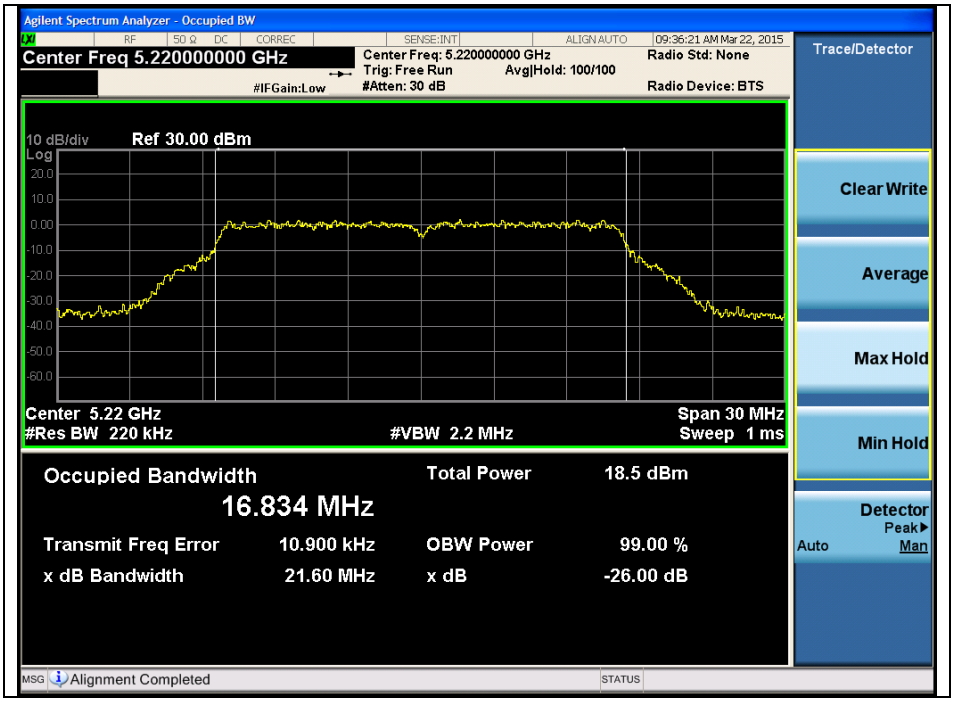
26 ㏈ Bandwidth & 99 % Bandwidth

802.11a (Band 1)

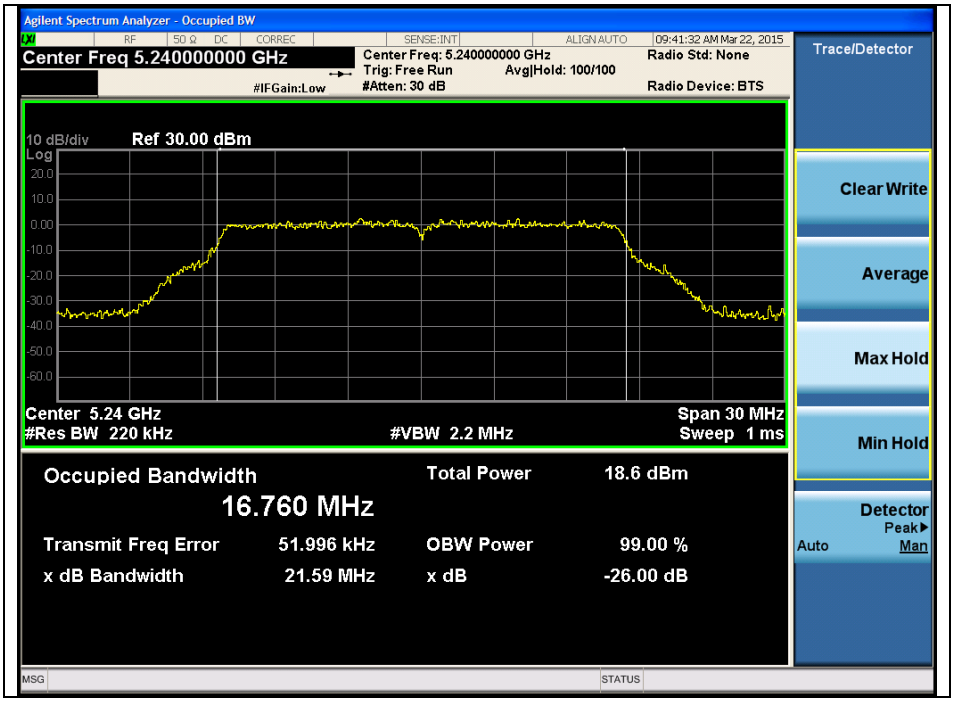
Low Channel (5 180 ㎒)



Middle Channel (5 220 ㎒)

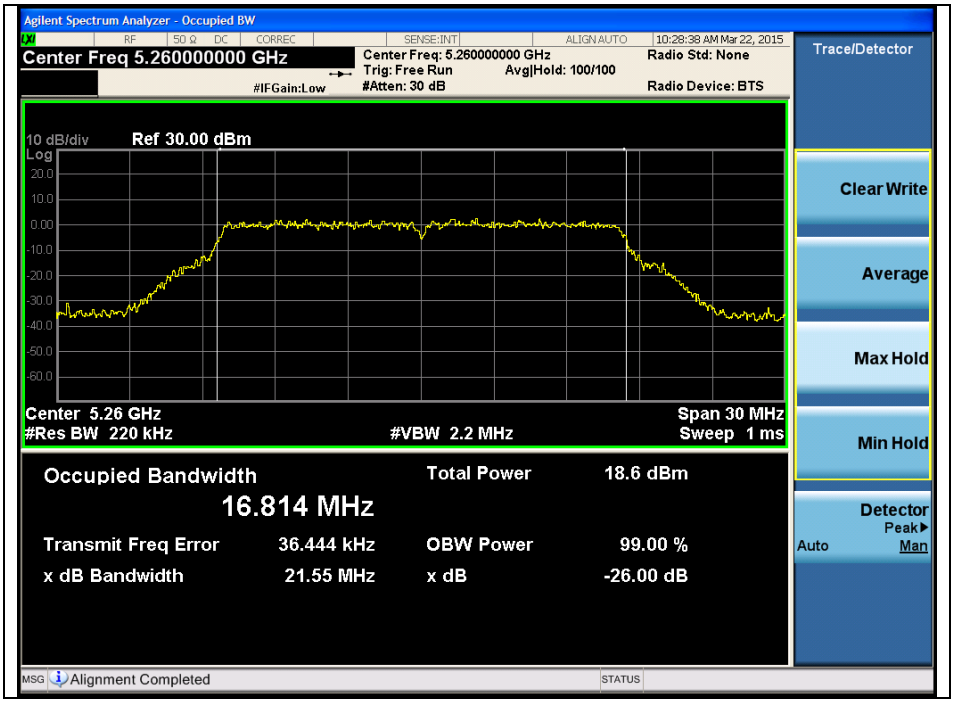


High Channel (5 240 ㎒)

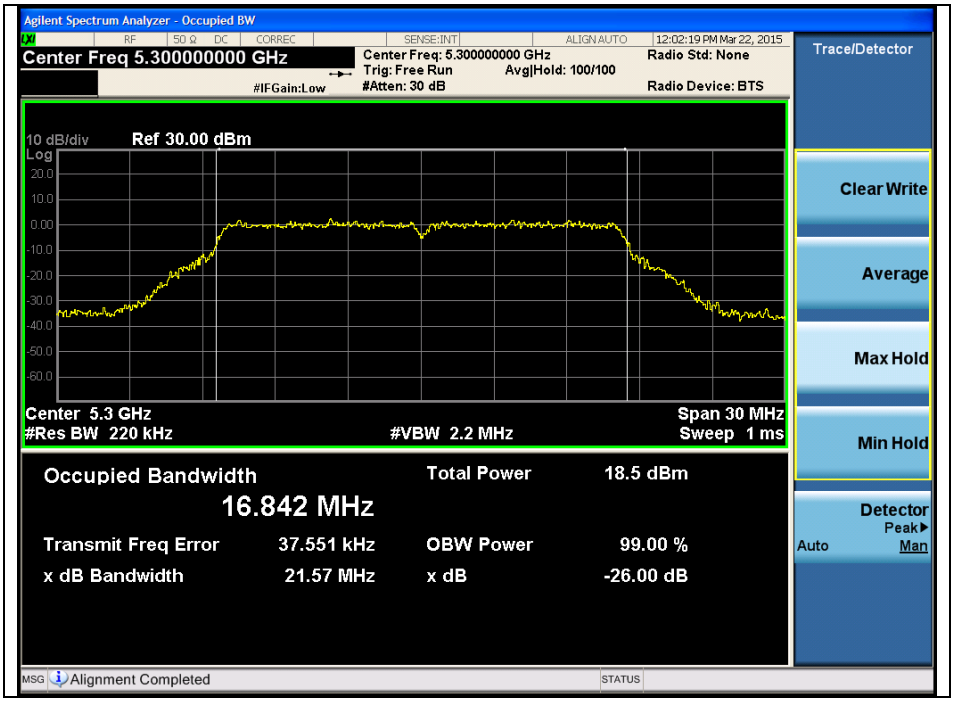


802.11a (Band 2A)

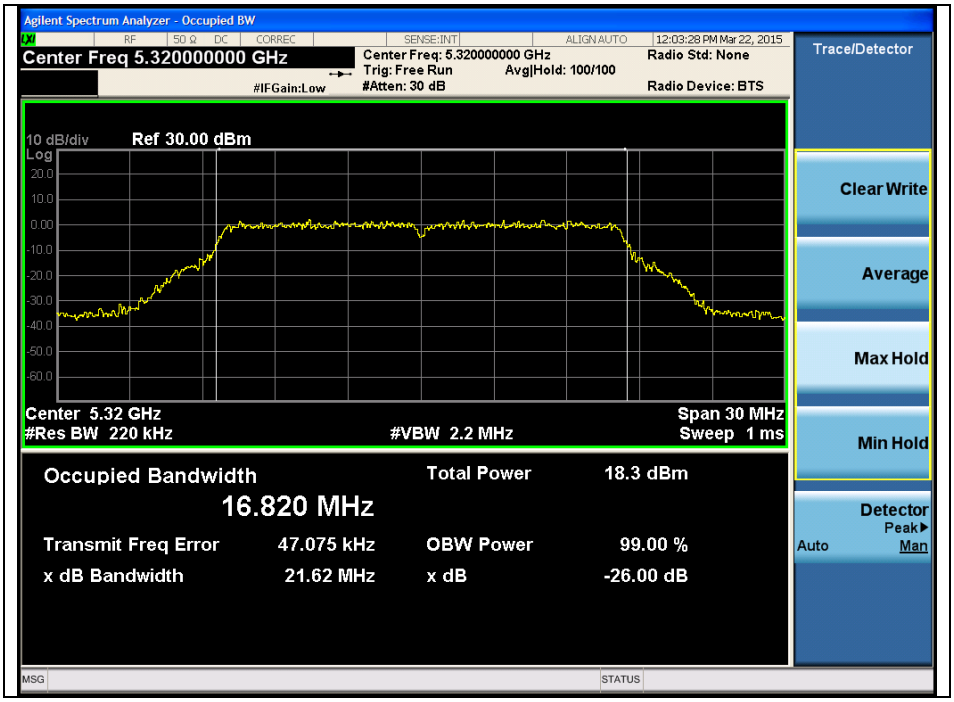
Low Channel (5 260 ㎒)



Middle Channel (5 300 ㎒)

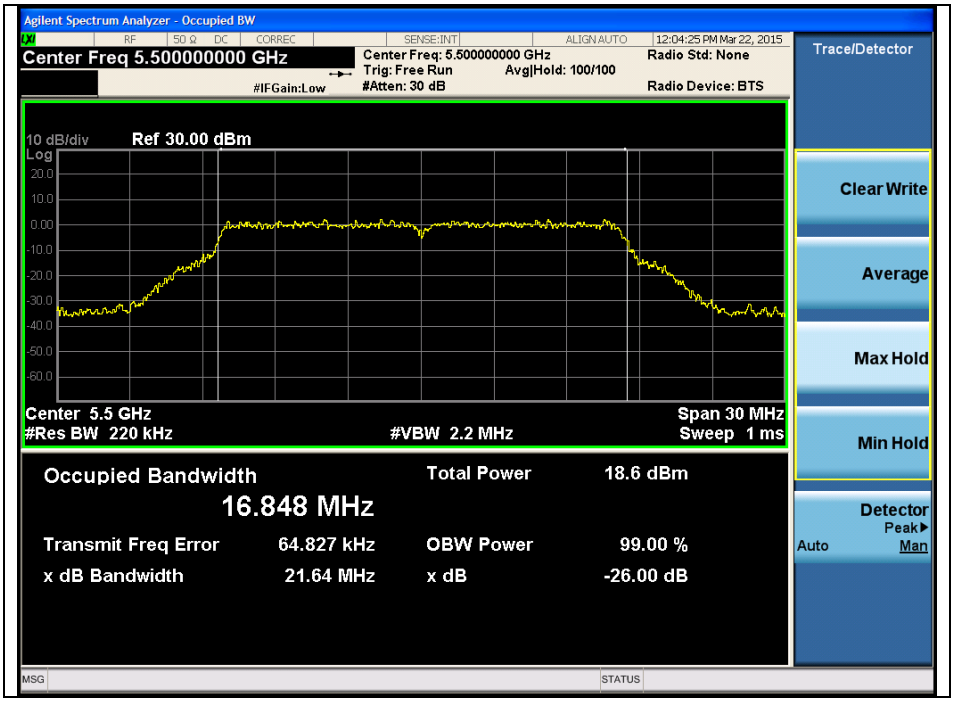


High Channel (5 320 ㎒)

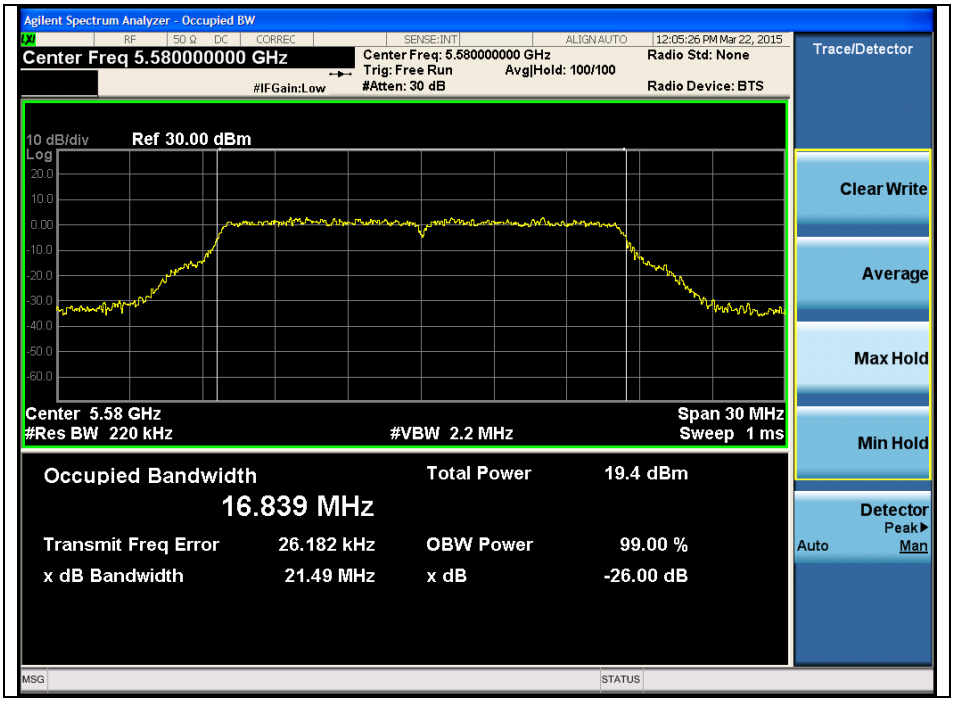


802.11a (Band 2C)

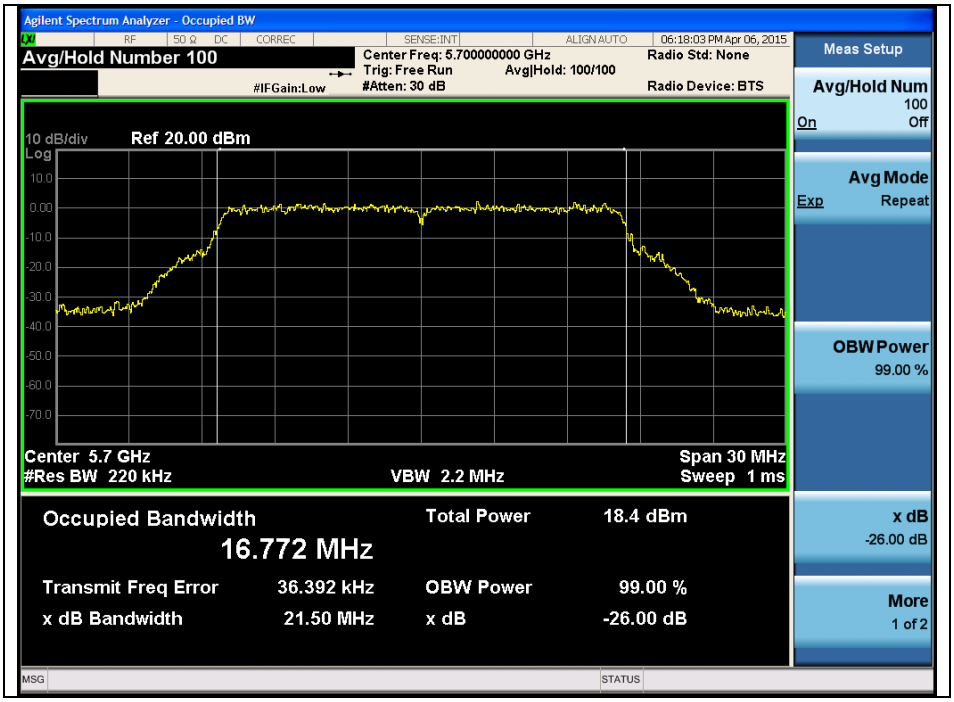
Low Channel (5 500 ㎒)



Middle Channel (5 580 ㎒)

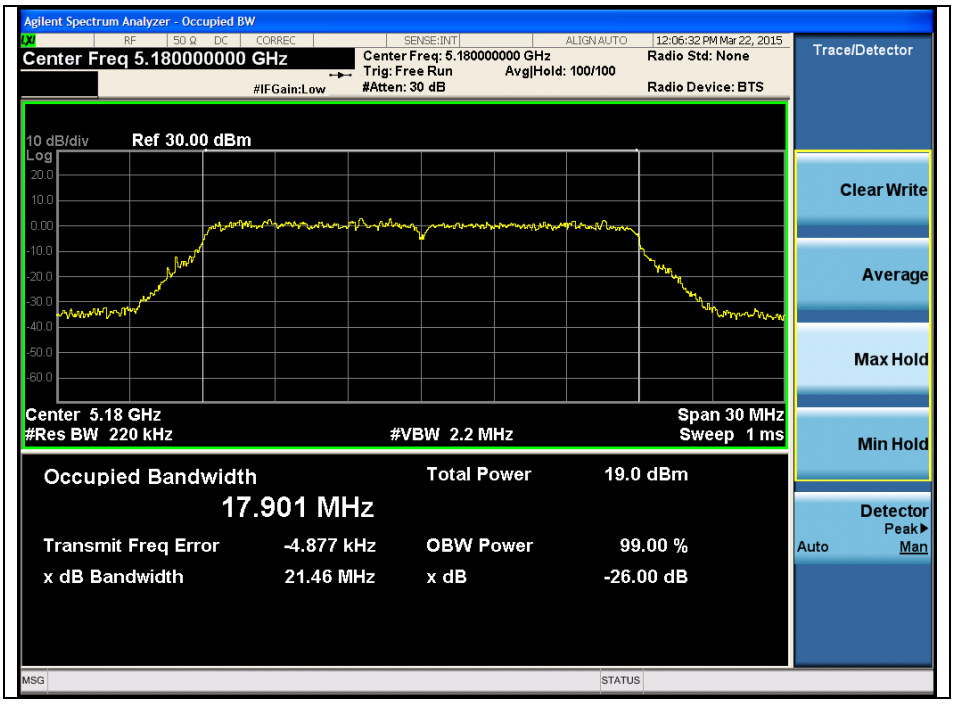


High Channel (5 700 ㎒)

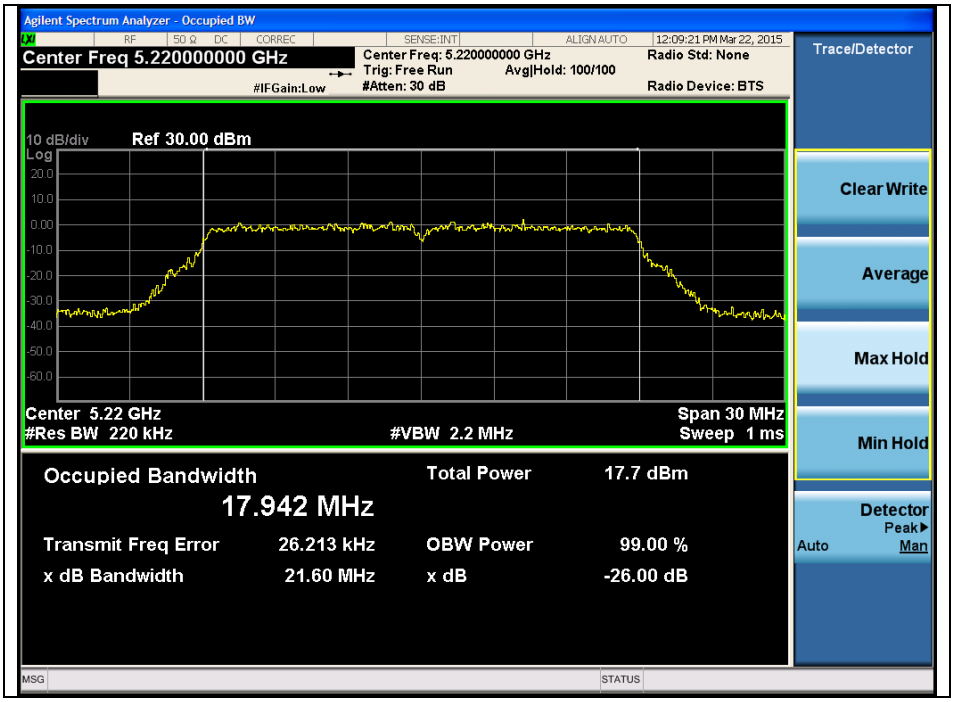


802.11n_HT20 (Band 1)

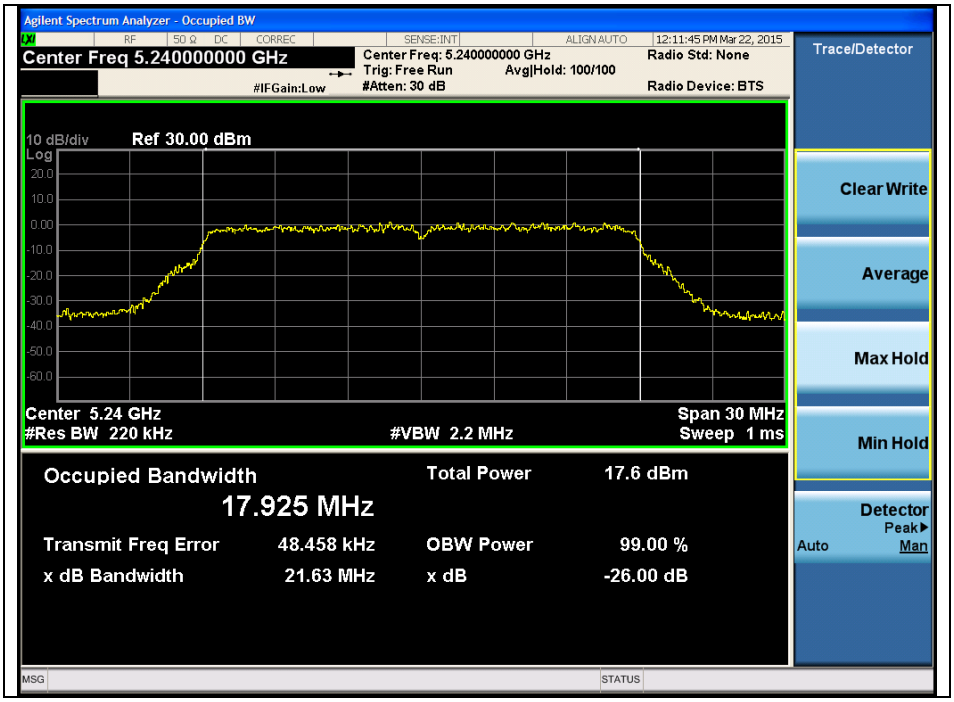
Low Channel (5 180 ㎒)



Middle Channel (5 220 ㎒)

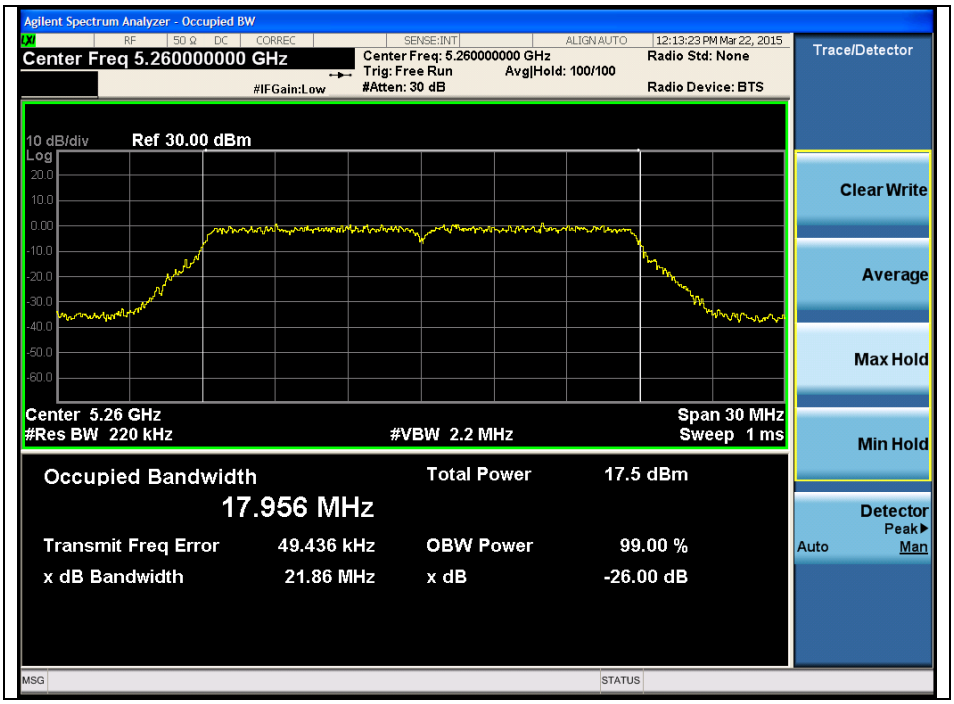


High Channel (5 240 ㎒)

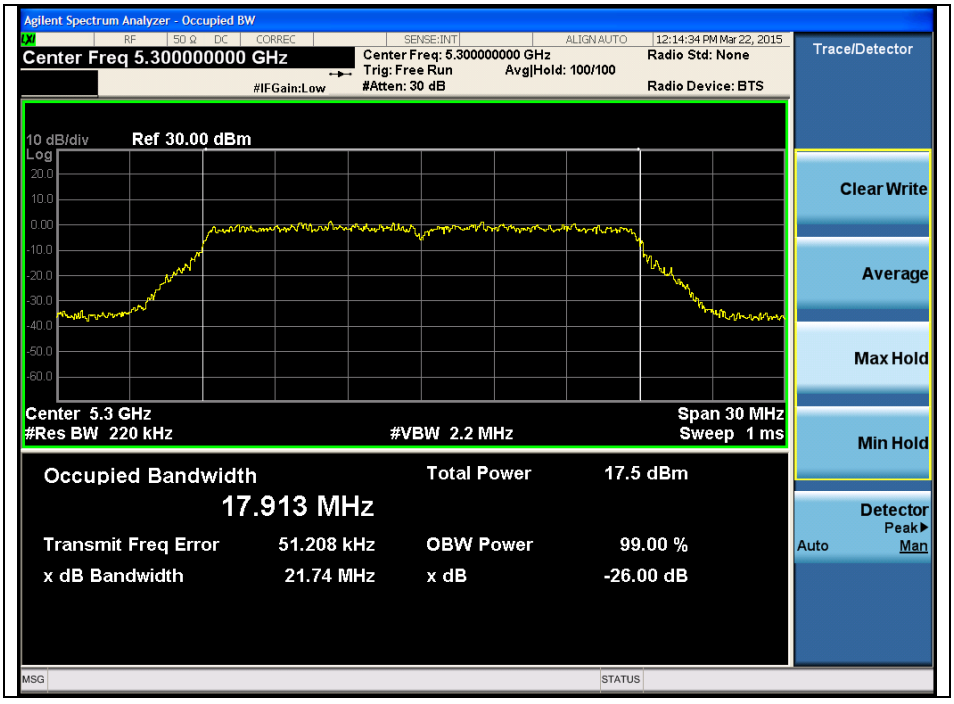


802.11n_HT20 (Band 2A)

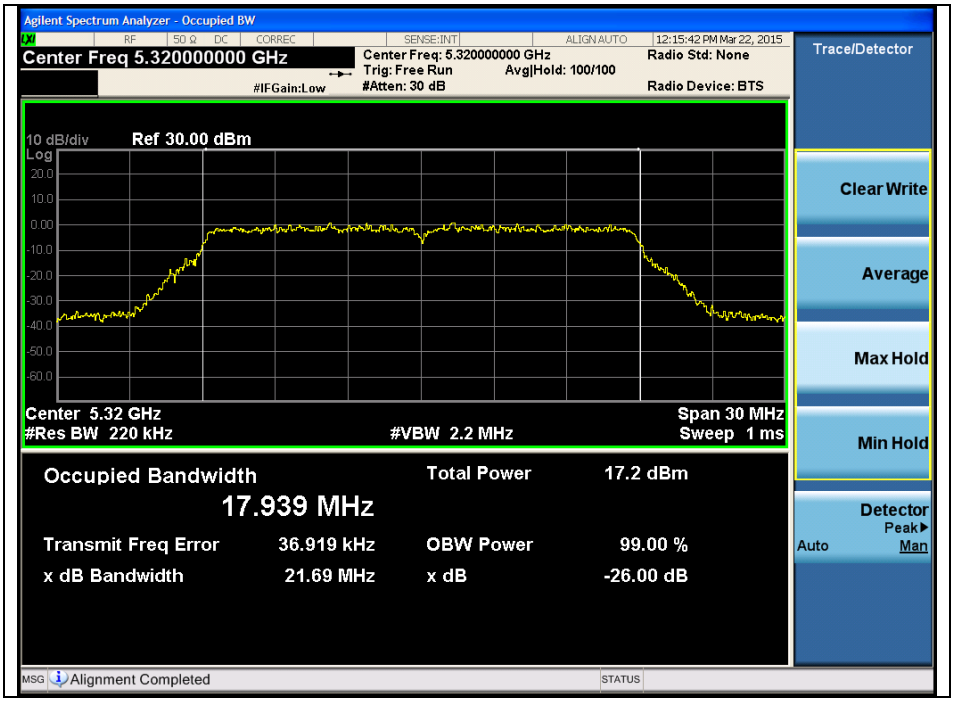
Low Channel (5 260 ㎒)



Middle Channel (5 300 ㎒)

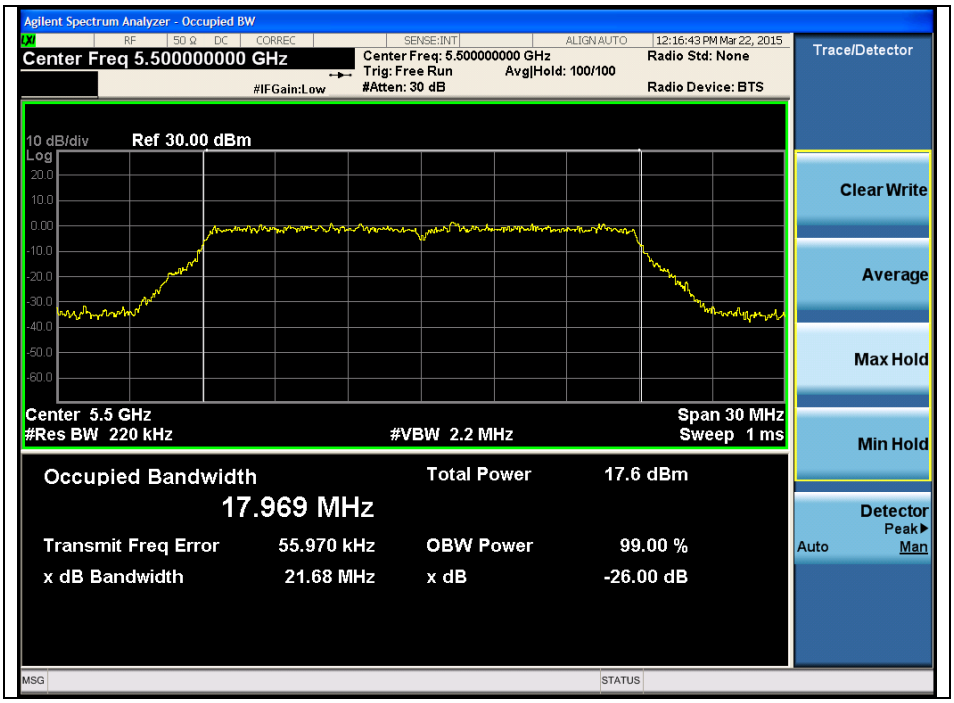


High Channel (5 320 ㎒)

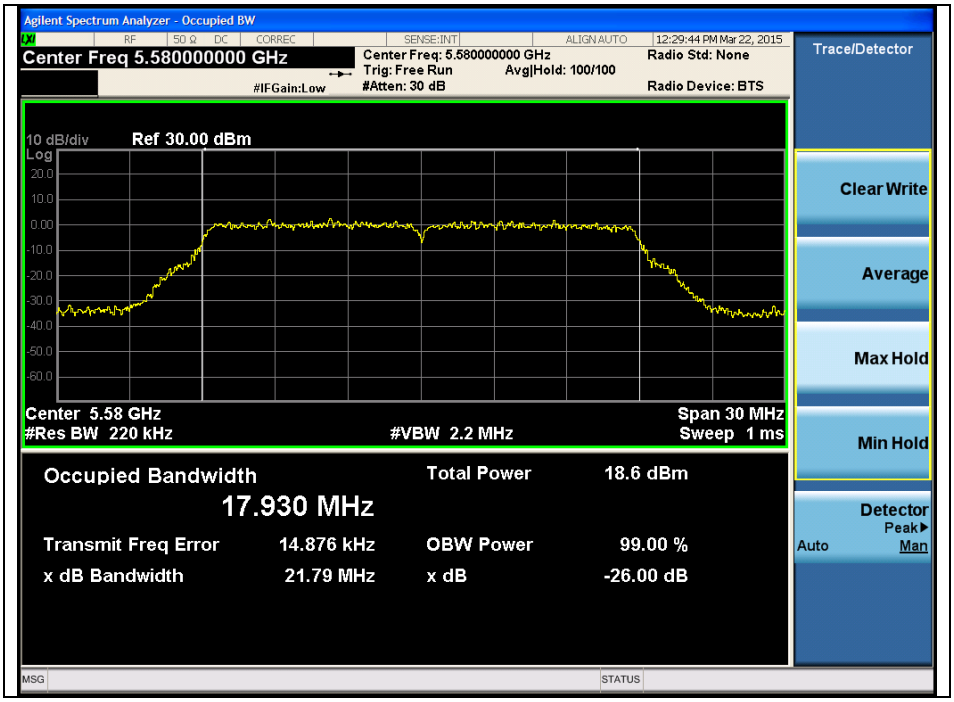


802.11n_HT20 (Band 2C)

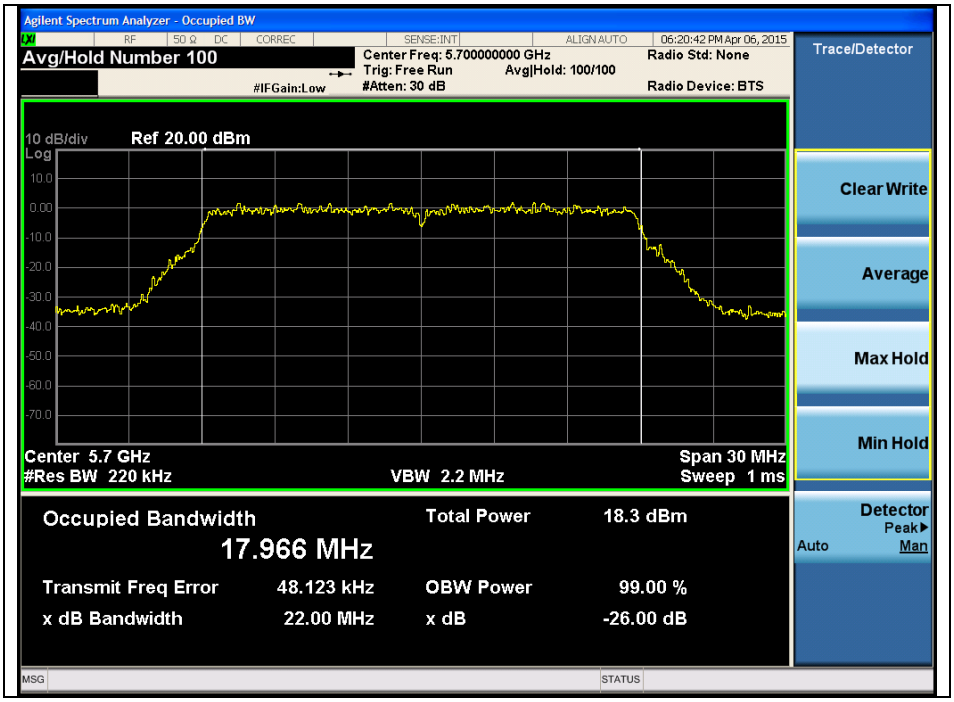
Low Channel (5 500 ㎒)



Middle Channel (5 580 ㎒)

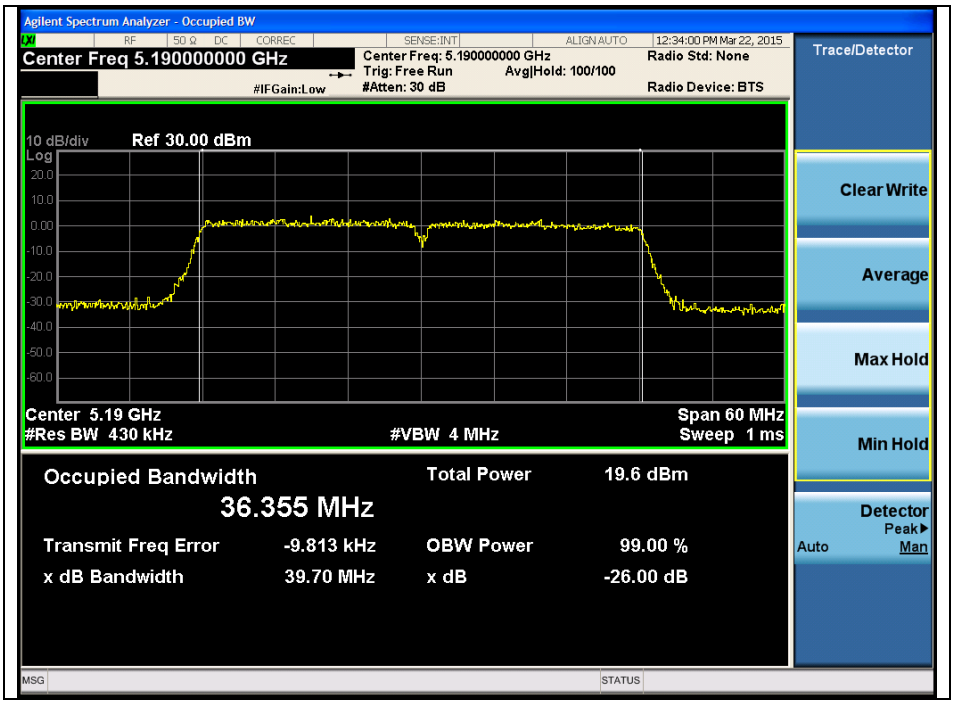


High Channel (5 700 ㎒)

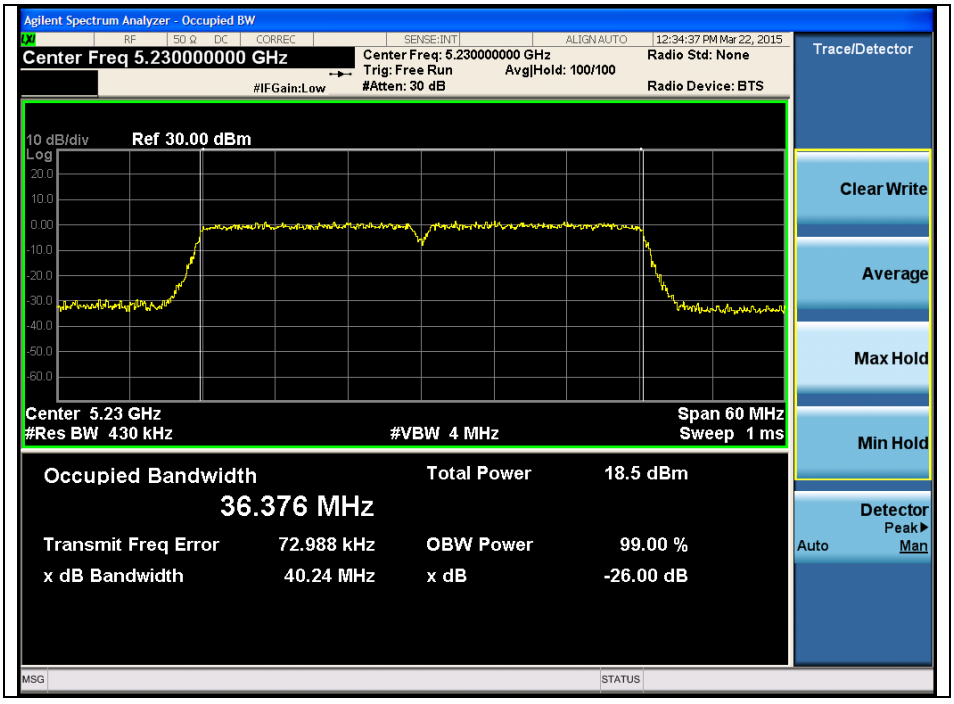


802.11n_HT40 (Band 1)

Low Channel (5 190 ㎒)

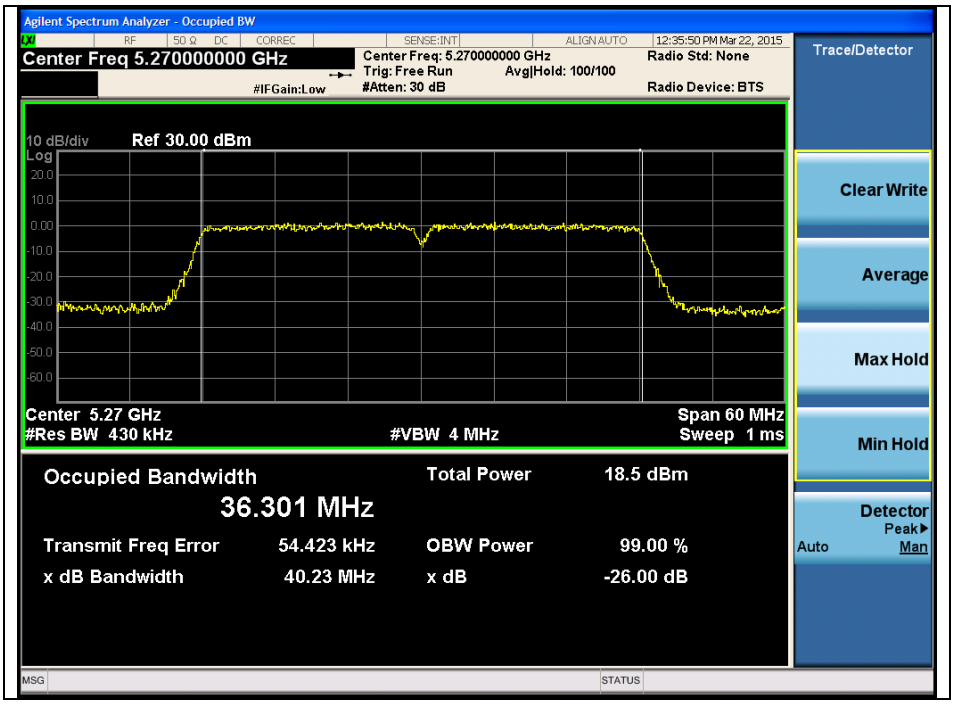


High Channel (5 230 ㎒)

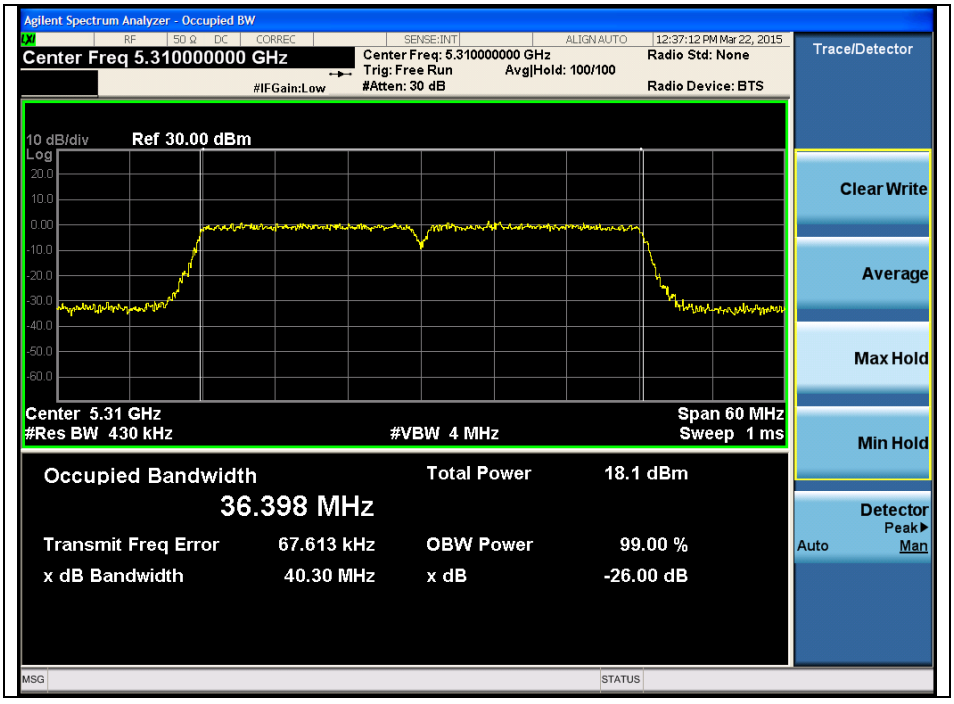


802.11n_HT40 (Band 2A)

Low Channel (5 270 ㎒)

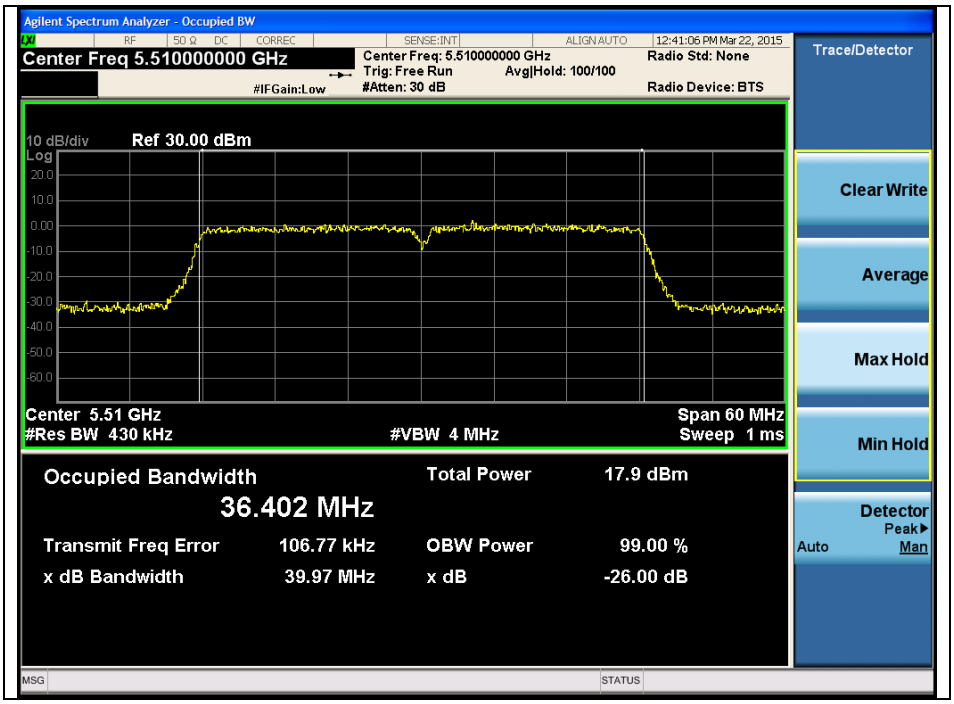


High Channel (5 310 ㎒)

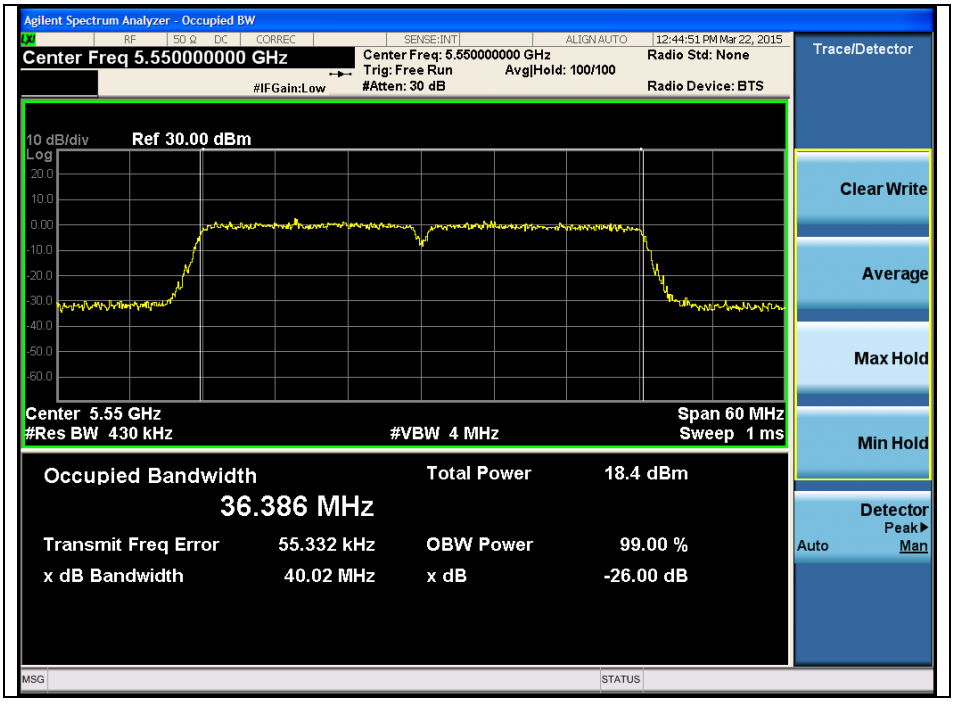


802.11n_HT40 (Band 2C)

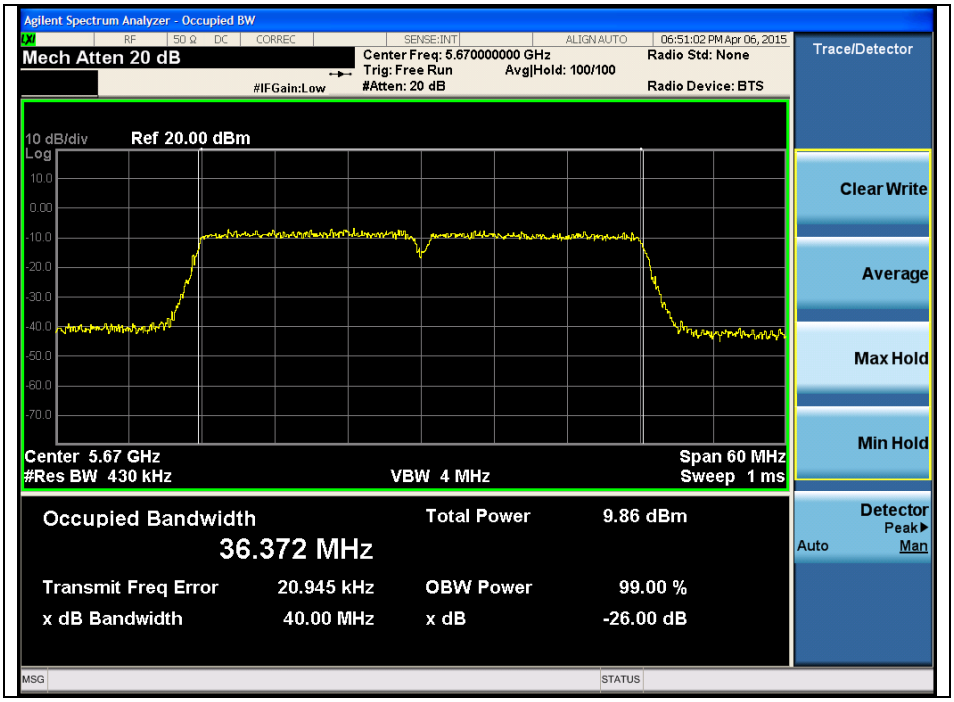
Low Channel (5 510 ㎒)



Low Channel (5 550 ㎒)

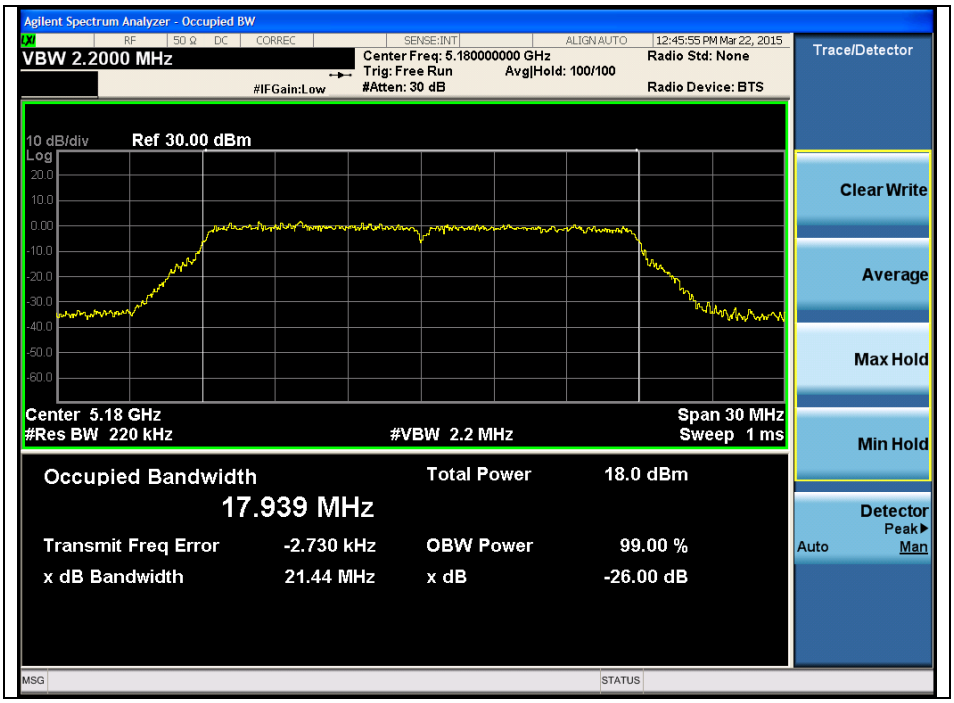


High Channel (5 670 ㎒)

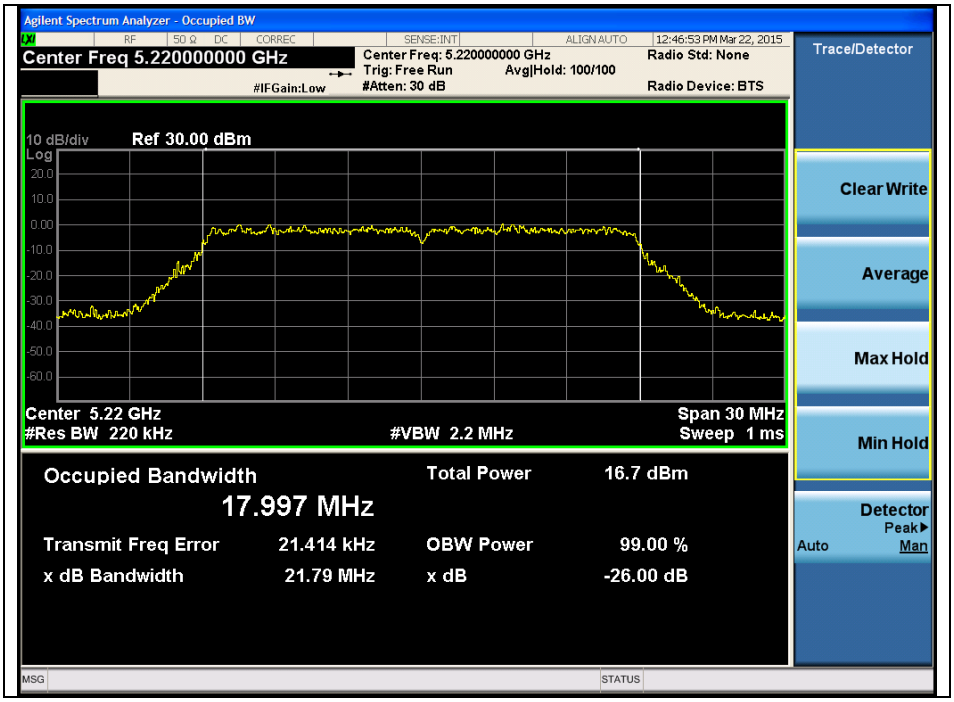


802.11ac_VHT20 (Band 1)

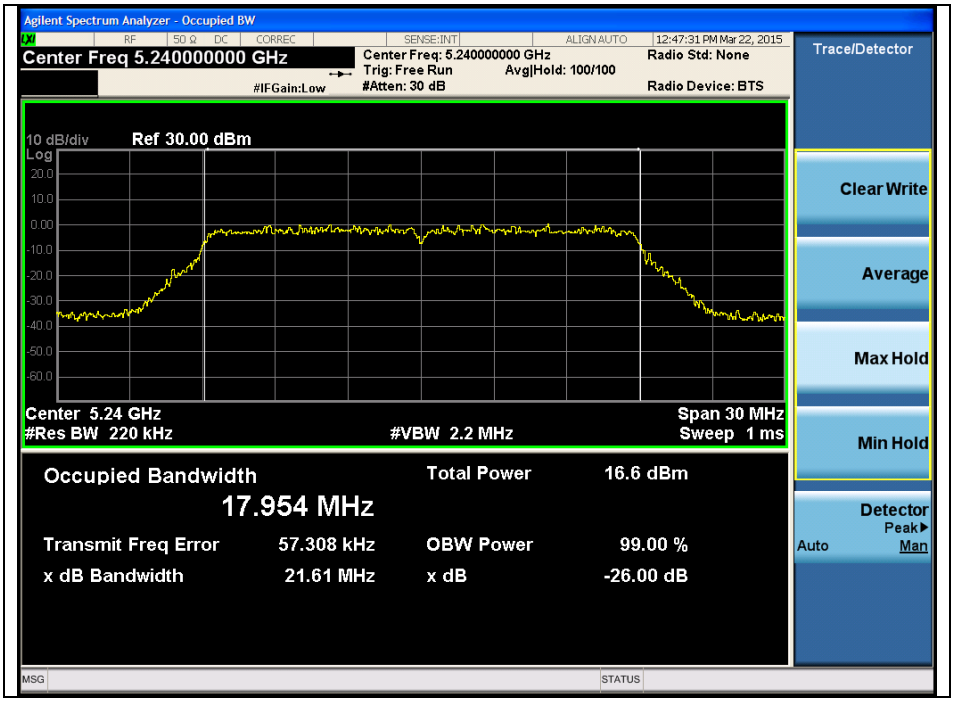
Low Channel (5 180 ㎒)



Middle Channel (5 220 ㎒)

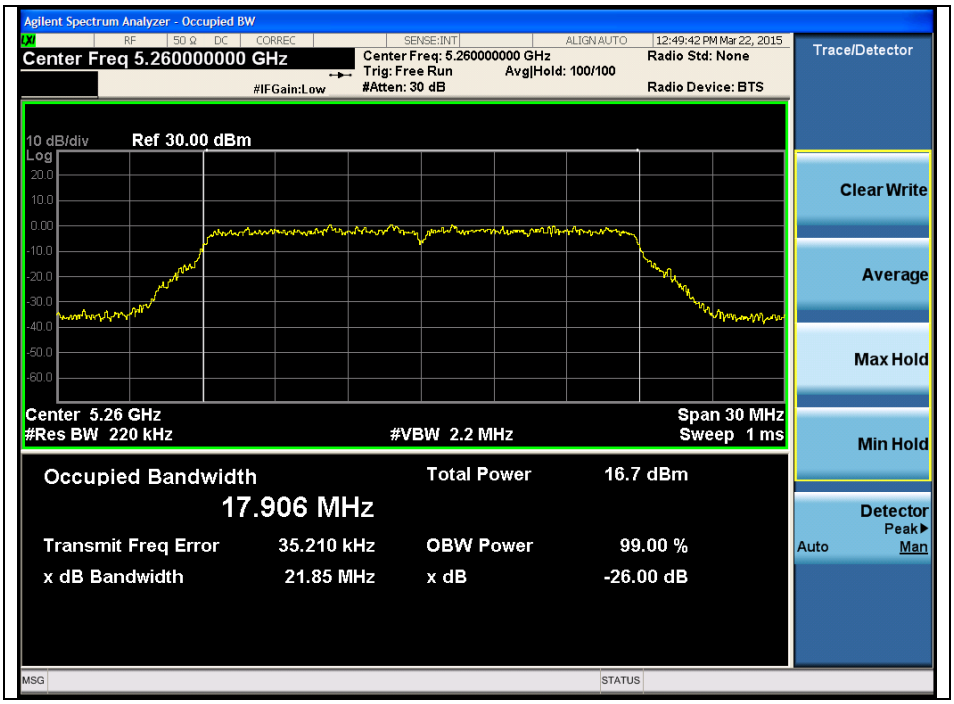


High Channel (5 240 ㎒)

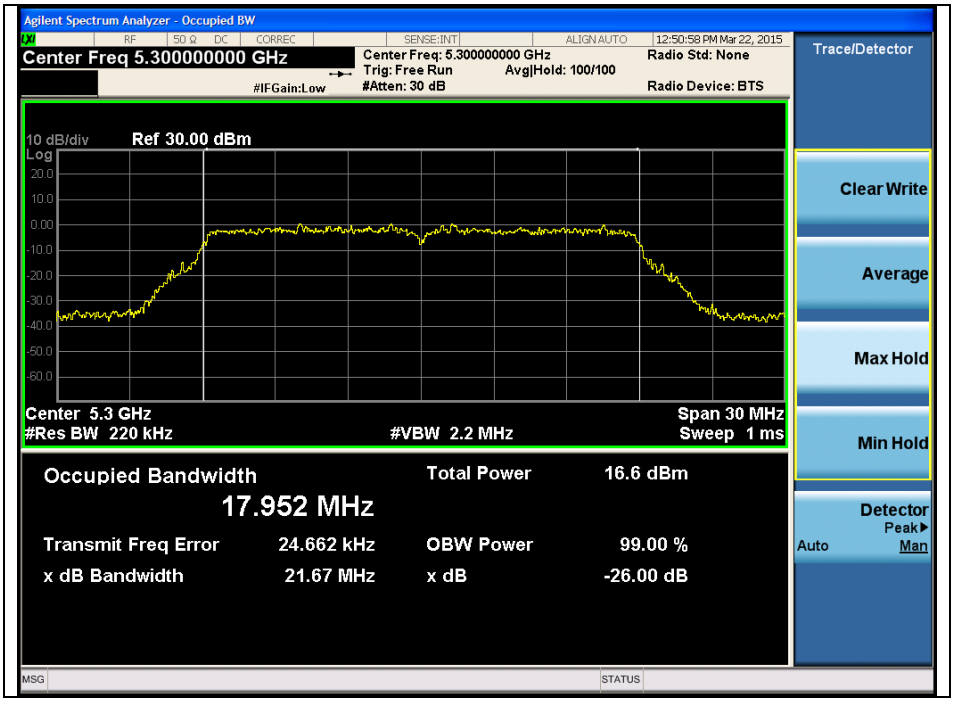


802.11ac_VHT20 (Band 2A)

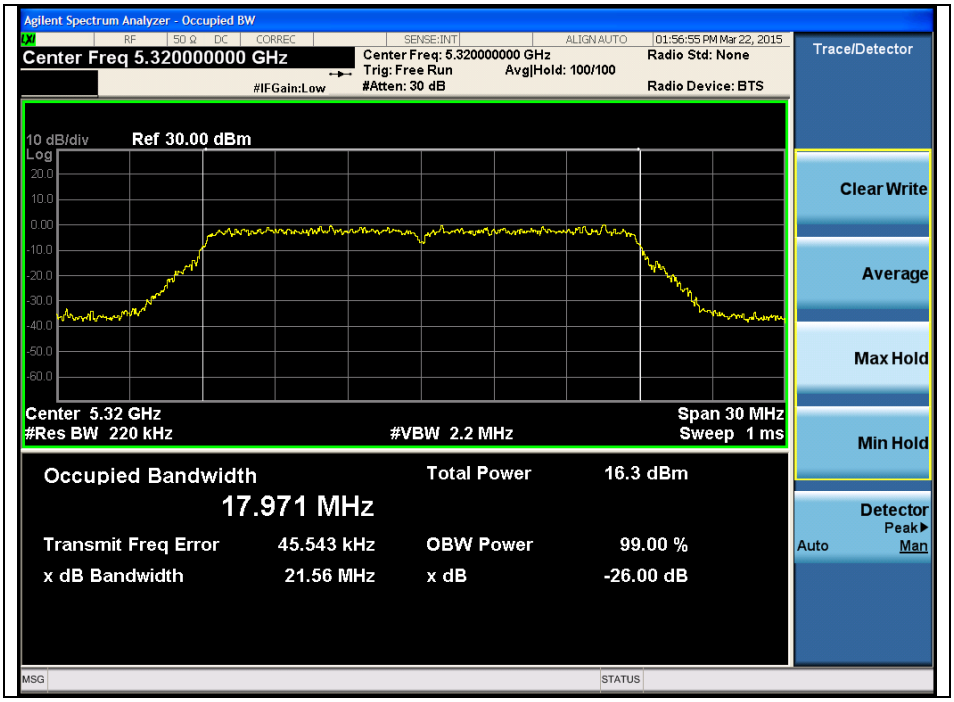
Low Channel (5 260 ㎒)



Middle Channel (5 300 ㎒)

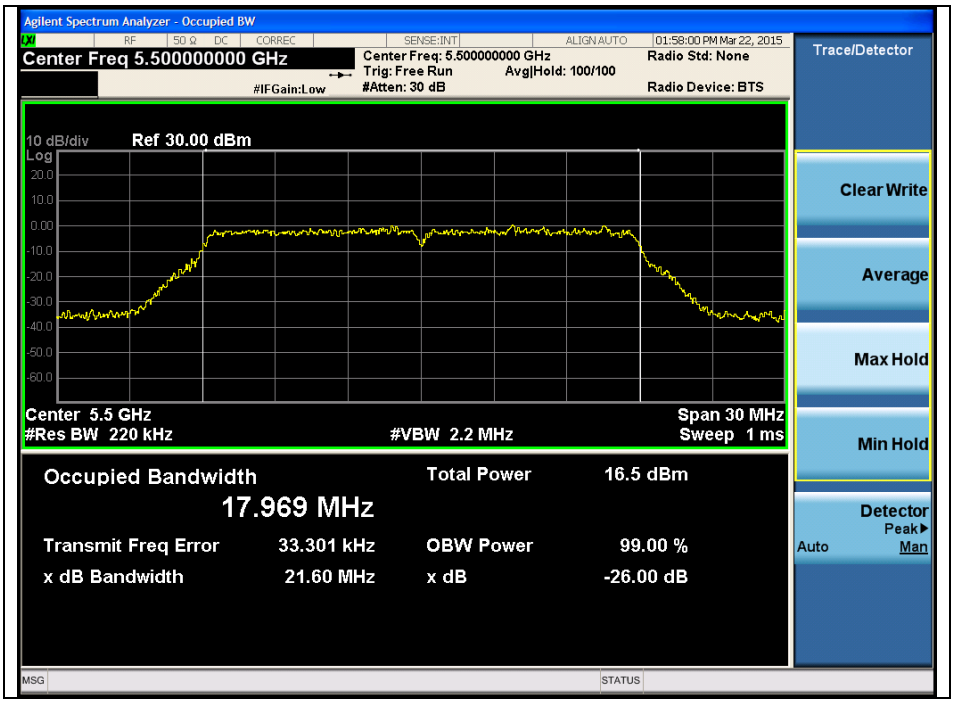


High Channel (5 320 ㎒)

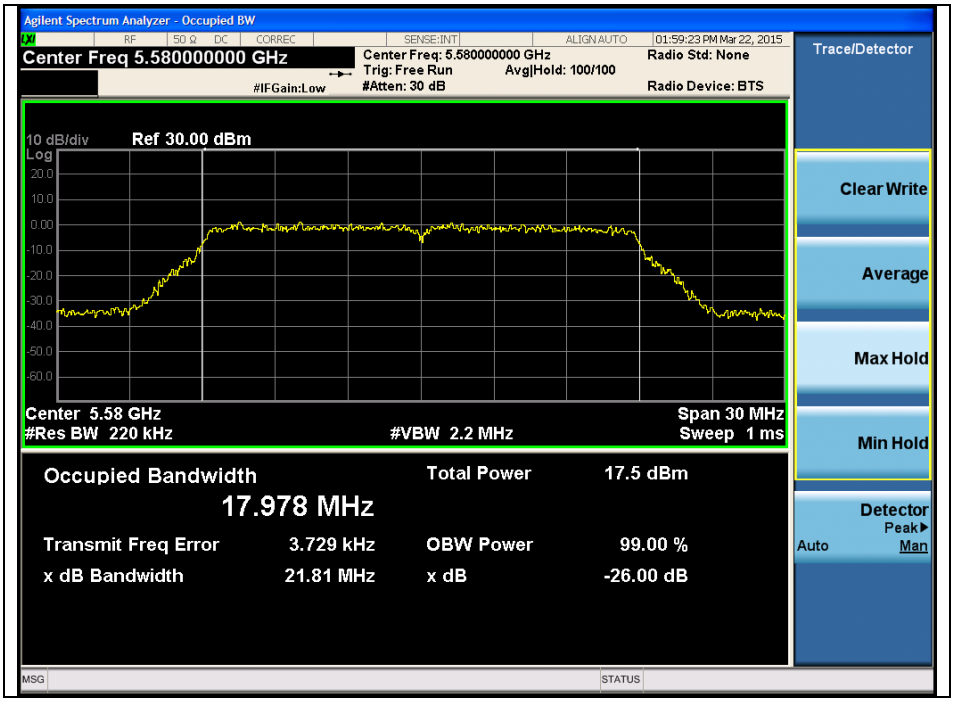


802.11ac_VHT20 (Band 2C)

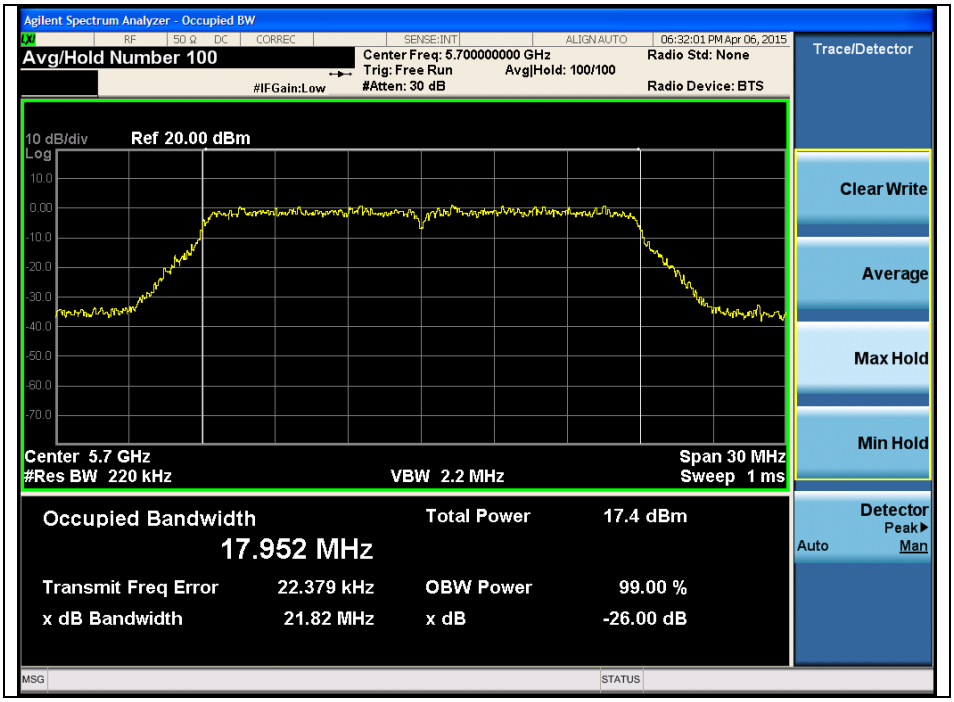
Low Channel (5 500 ㎒)



Middle Channel (5 580 ㎒)

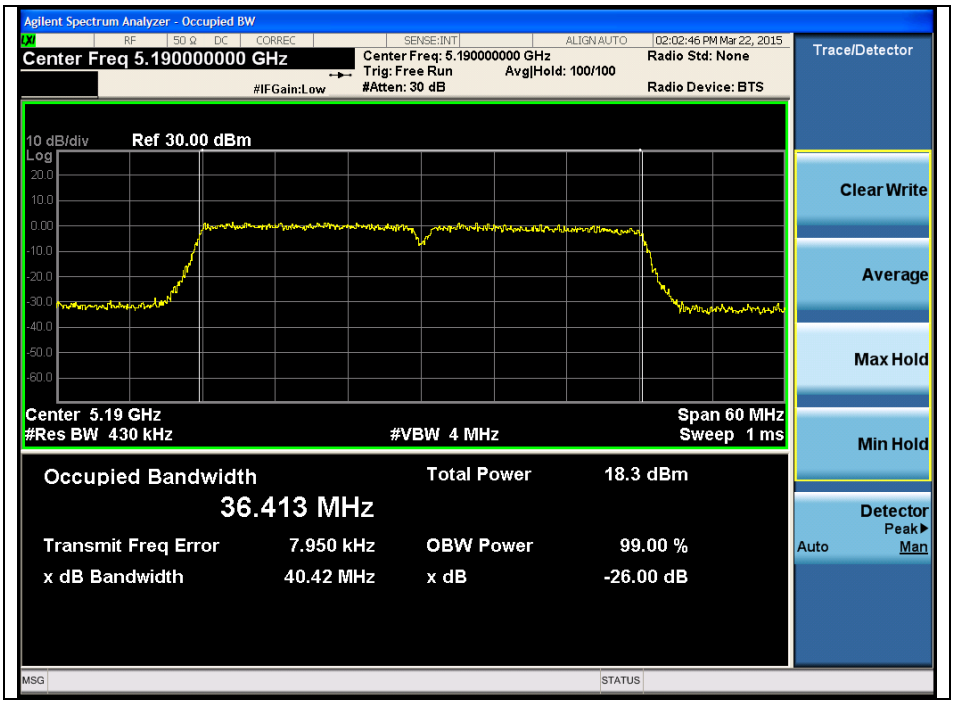


High Channel (5 700 ㎒)

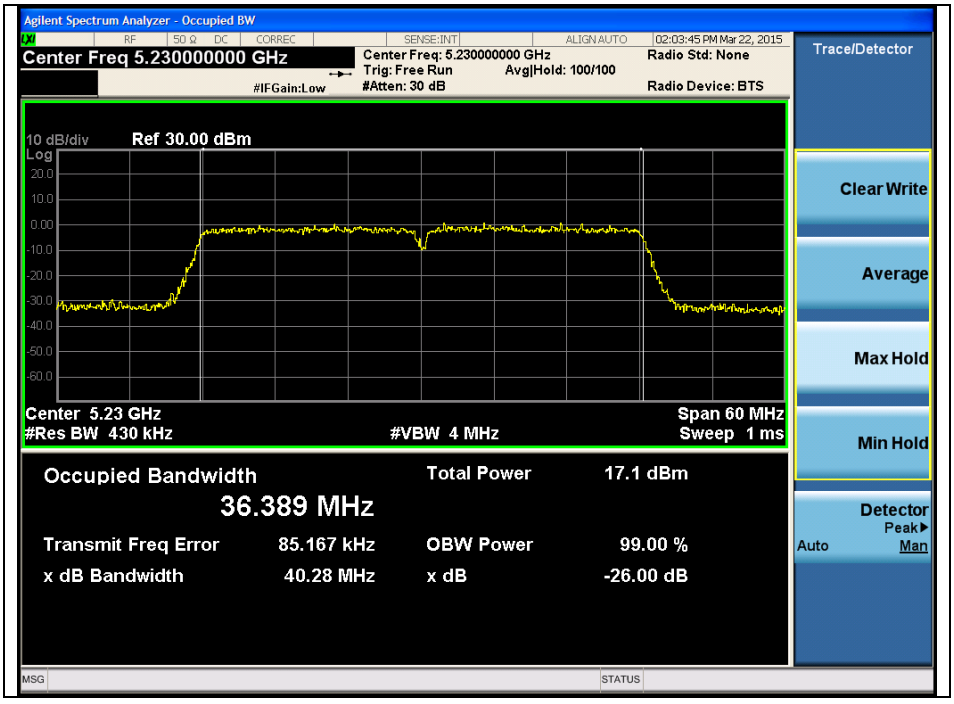


802.11ac_VHT40 (Band 1)

Low Channel (5 190 ㎒)

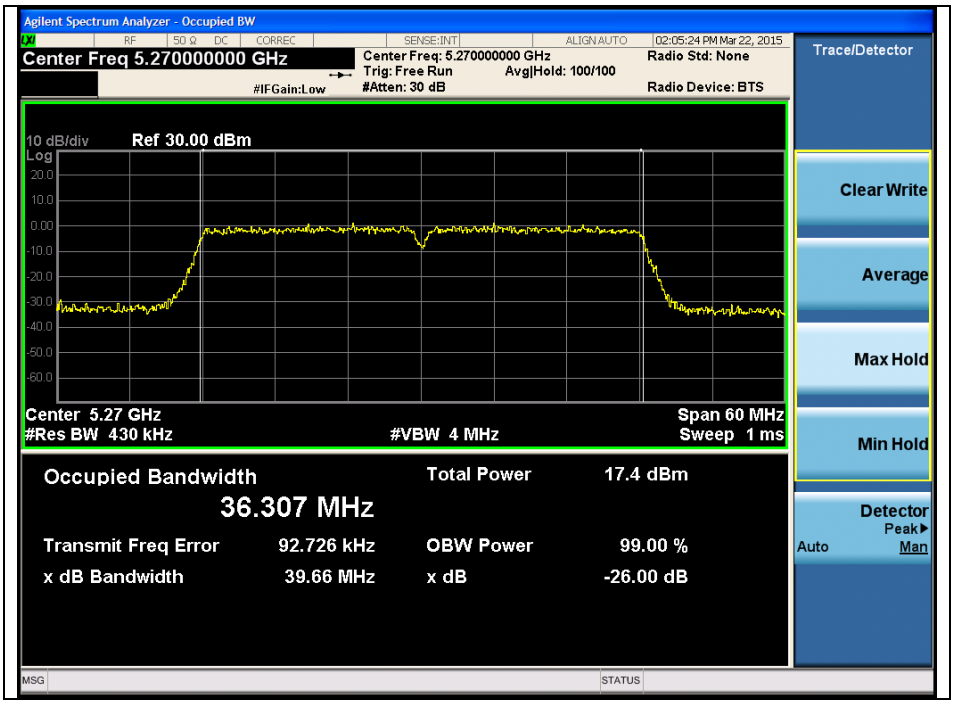


High Channel (5 230 ㎒)

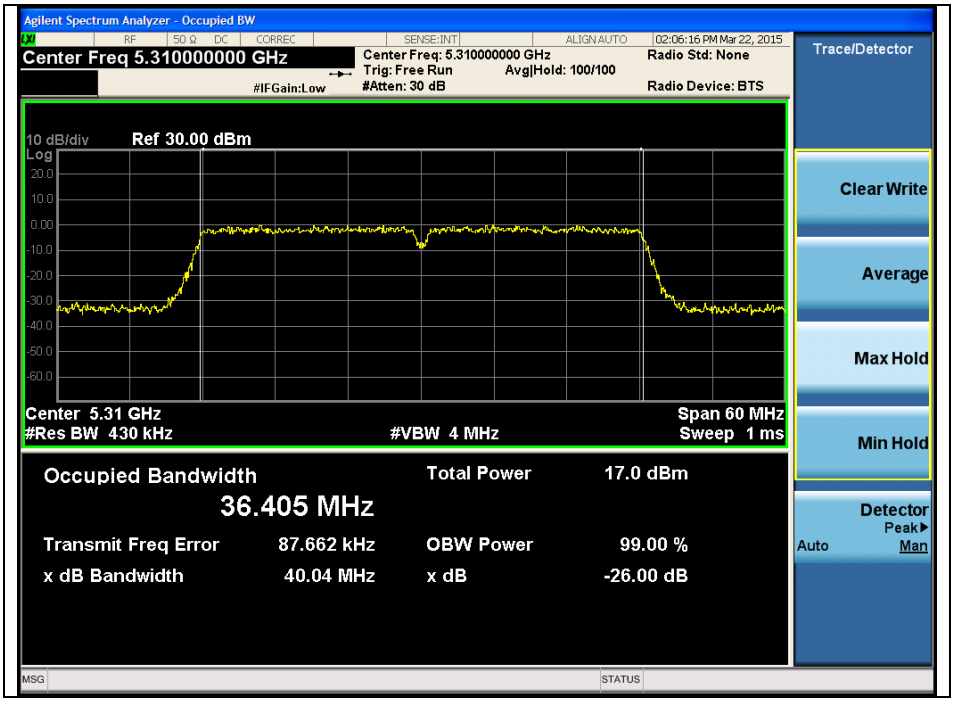


802.11ac_VHT40 (Band 2A)

Low Channel (5 270 ㎒)

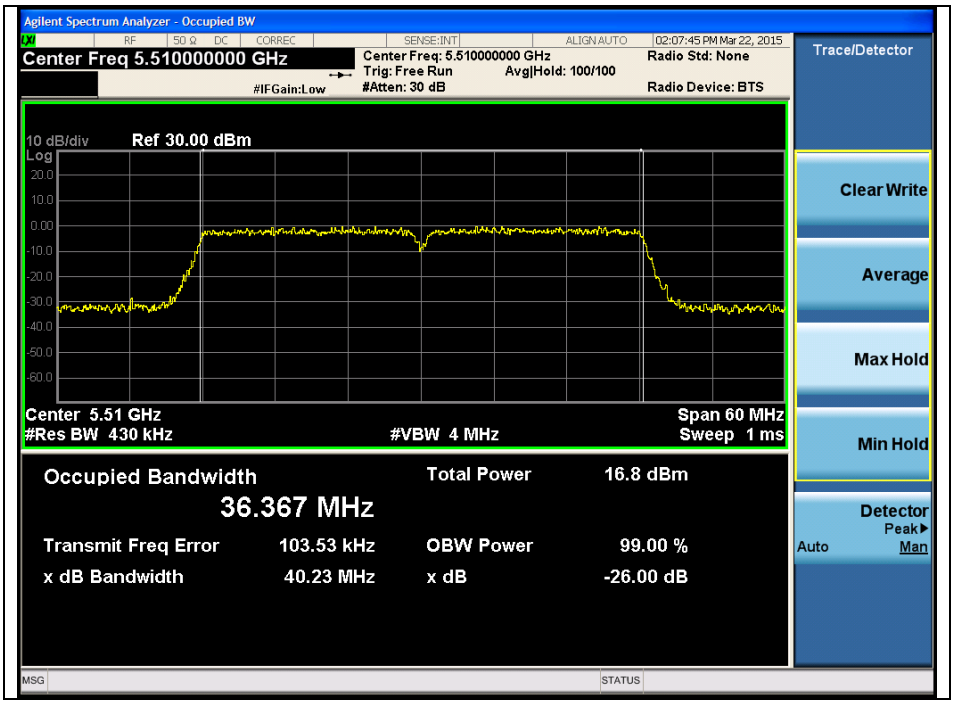


High Channel (5 310 ㎒)

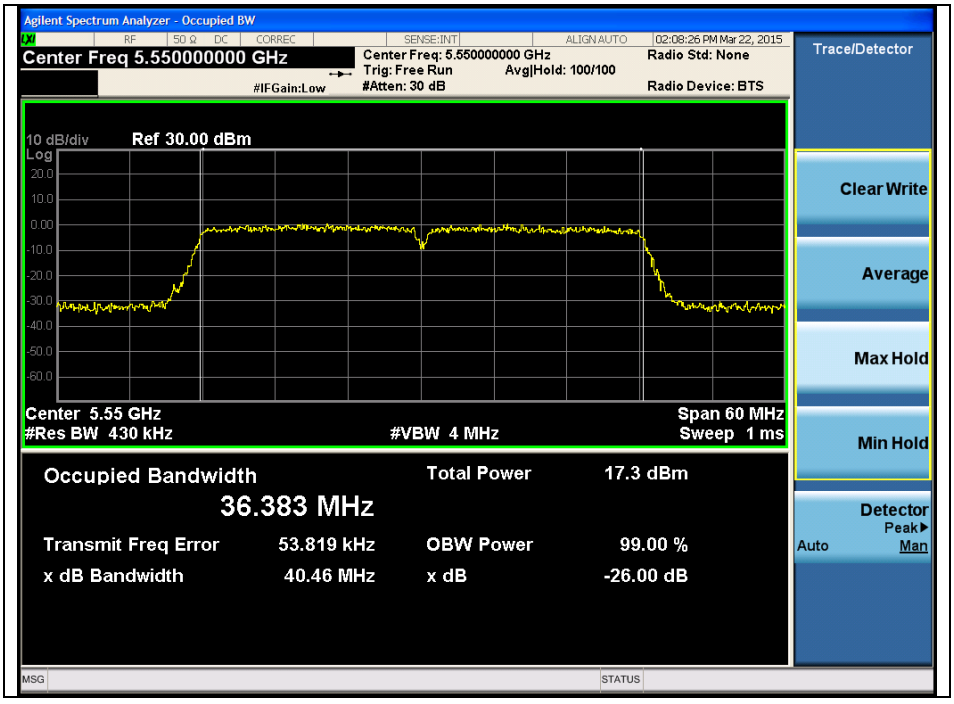


802.11ac_VHT40 (Band 2C)

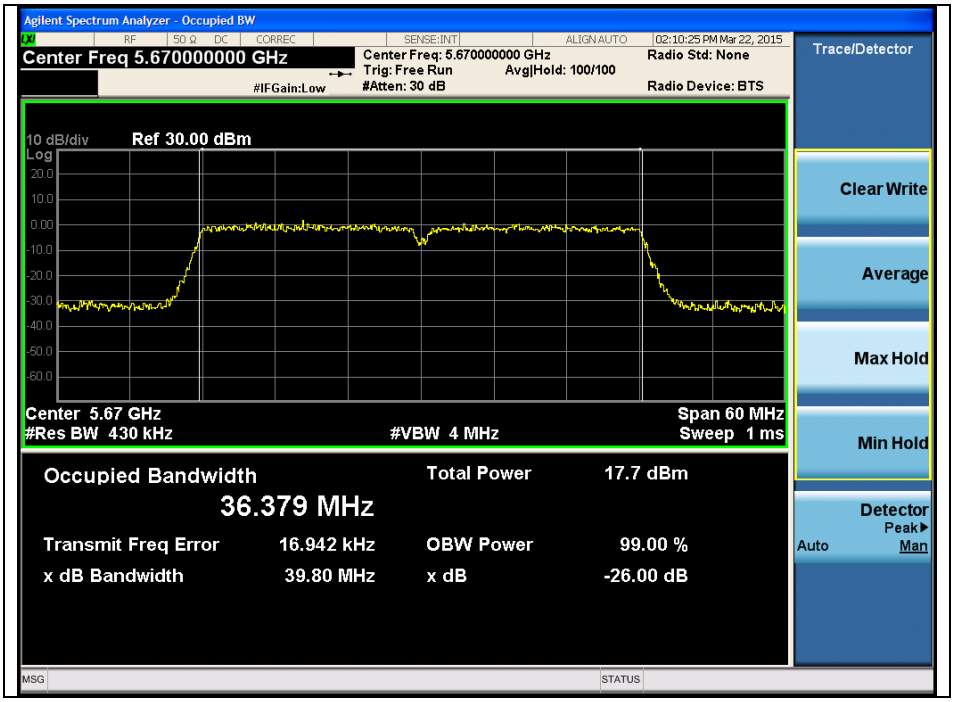
Low Channel (5 510 ㎒)



Middle Channel (5 550 ㎒)

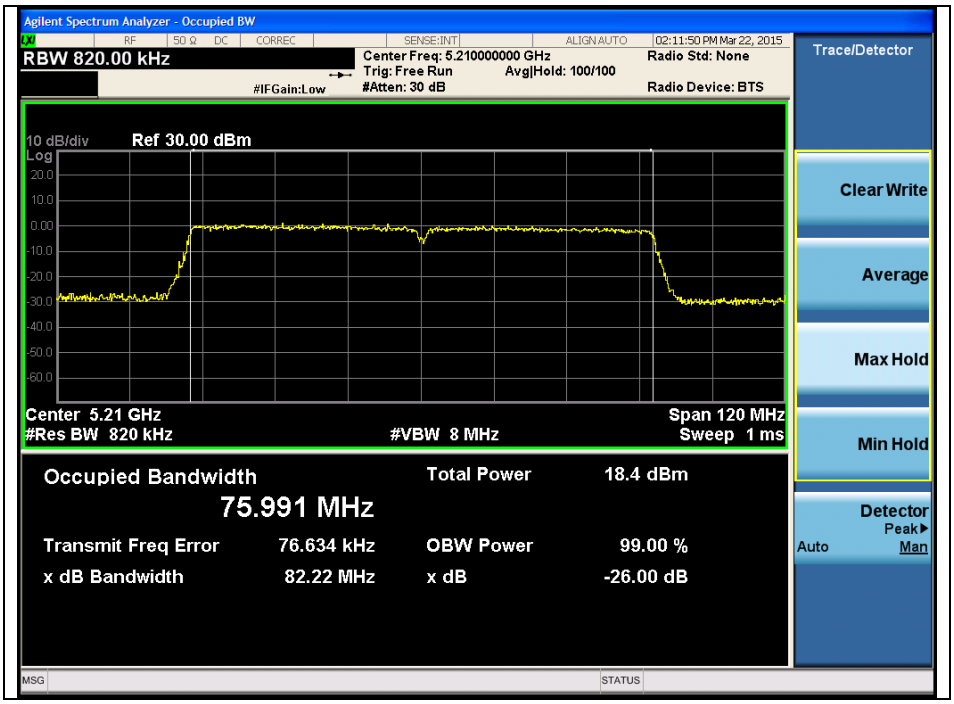


High Channel (5 670 ㎒)



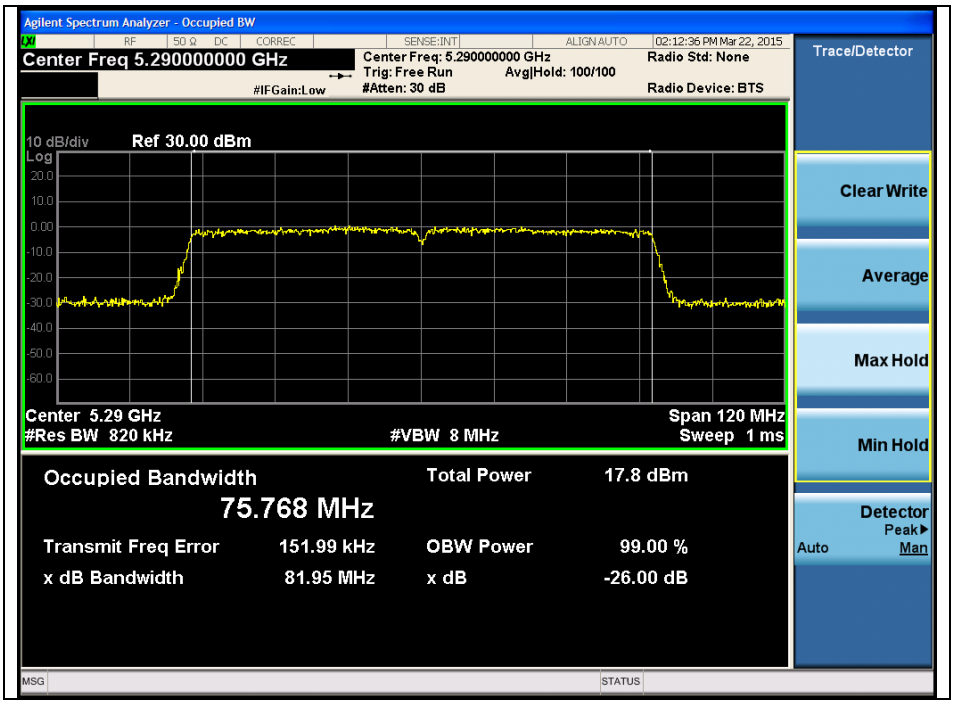
802.11ac_VHT80 (Band 1)

Middle Channel (5 210 ㎒)



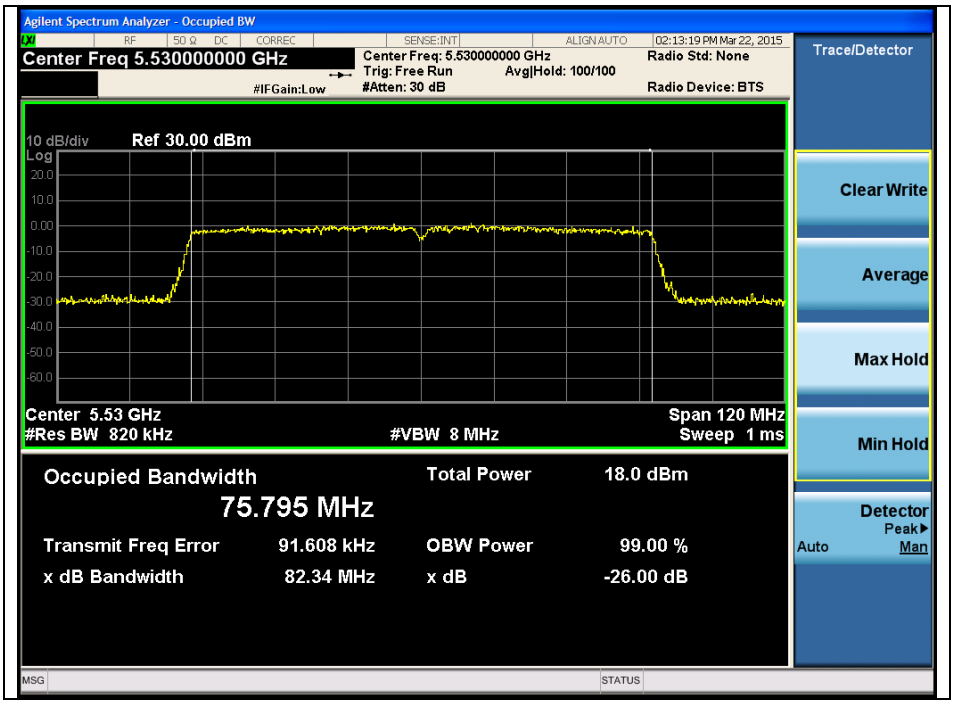
802. 11ac_VHT80 (Band 2A)

Middle Channel (5 290 ㎒)



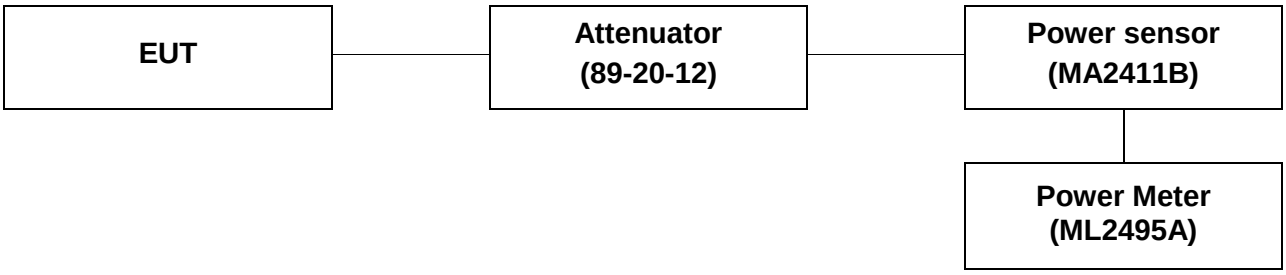
802. 11ac_VHT80 (Band 2C)

Low Channel (5 530 ㎒)



4. Output power

4.1. Test setup



4.2. Limit

4.2.1. FCC 15.407

(a)(1)(iv)

For mobile and portable client devices in the 5.15 - 5.25 ㎓ band, the maximum conducted output power over the frequency band of operation shall not exceed 250 ㎽ provided the maximum antenna gain does not exceed 6 ㏈i. In addition, the maximum power spectral density shall not exceed 11 ㏈m in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 ㏈i are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in ㏈ that the directional gain of the antenna exceeds 6 ㏈i.

(a)(2)

For the 5.25 - 5.35 ㎓ and 5.47 - 5.725 ㎓ bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 ㎽ or 11 ㏈m 10 log B, where B is the 26 ㏈ emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 ㏈m in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 ㏈i are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in ㏈ that the directional gain of the antenna exceeds 6 ㏈i.

4.3. Test procedure

1. This measurement settings are specified in clause 3) a) of section E of KDB 789033 D02 New rules v01.
2. Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the conditions listed below are satisfied.
   - The EUT is configured to transmit continuously or to transmit with a consistent duty cycle.
   - At all times when the EUT is transmitting, it must be transmitting at its maximum power control level.
   - The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
3. If the transmitter does not transmit continuously, measure the duty cycle, x, of the transmitter output signal as described in section B).
4. Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
5. Adjust the measurement in dBm by adding 10 log (1/x) where x is the duty cycle (e.g., 10 log(1/0.25) if the duty cycle is 25 percent).

4.4. Test result

Ambient temperature : (23 ± 1) ℃
Relative humidity : 47 % R.H.

- 11a

Band	Power	Frequency (㎒)	Conducted Power (㏈m)							
			Data Rate [Mbps]							
			6	9	12	18	24	36	48	54
U-NII 1	Mea. average	5 180	11.86	11.25	11.24	11.08	11.01	10.74	10.26	10.20
	Result		**12.08**	11.57	11.65	11.74	11.77	11.76	11.75	11.69
	Mea. average	5 220	11.56	11.22	11.23	11.08	10.87	10.63	10.31	10.15
	Result		**11.78**	11.54	11.64	11.74	11.63	11.65	11.80	11.64
	Mea. average	5 240	11.65	11.20	11.13	11.09	10.92	10.64	10.11	10.15
	Result		**11.87**	11.52	11.54	11.75	11.68	11.66	11.60	11.64
U-NII 2A	Mea. average	5 260	11.69	11.24	11.09	11.08	11.01	10.68	10.28	10.11
	Result		**11.91**	11.56	11.50	11.74	11.77	11.70	11.77	11.60
	Mea. average	5 300	11.65	11.15	11.18	11.11	10.95	10.63	10.13	10.08
	Result		**11.87**	11.47	11.59	11.77	11.71	11.65	11.62	11.57
	Mea. average	5 320	11.48	11.08	10.93	10.81	10.62	10.48	10.12	10.00
	Result		**11.70**	11.40	11.34	11.47	11.38	11.50	11.61	11.49
U-NII 2C	Mea. average	5 500	11.76	11.50	11.39	11.24	11.06	10.77	10.46	10.34
	Result		**11.98**	11.82	11.80	11.90	11.82	11.79	11.95	11.83
	Mea. average	5 580	11.84	11.14	11.21	11.10	10.99	10.78	10.26	10.08
	Result		**12.06**	11.46	11.62	11.76	11.75	11.80	11.75	11.57
	Mea. average	5 700	11.60	11.01	11.19	11.04	10.84	10.69	10.16	10.02
	Result		**11.82**	11.33	11.60	11.70	11.60	11.71	11.65	11.51

Band	Conducted Power Limit (㏈m)					
	Frequency (㎒)	Fixed Limit (㏈m)	26 dB BW (㎒)	11+10LogB (㏈m)	Antenna gain (㏈i)	Limit (㏈)
U-NII 1	5 180	24				
	5 220	24				
	5 240	24				
U-NII 2A	5 260	24	21.55	24.33	1.01	24
	5 300	24	21.57	24.34	1.01	24
	5 320	24	21.62	24.35	1.01	24
U-NII 2C	5 500	24	21.64	24.35	1.01	24
	5 580	24	21.49	24.32	1.01	24
	5 700	24	21.50	24.32	1.01	24

Mode	Duty cycle							
	Data Rate [Mbps]							
11a	6	9	12	18	24	36	48	54
Duty Cycle (%)	95	93	91	86	84	79	71	71
Correction factor (㏈)	0.22	0.32	0.41	0.66	0.76	1.02	1.49	1.49

Remark:
1. Result (㏈m) = Average (㏈m) + Correction factor (㏈)
2. Duty cycle (%) = (Tx on time / Tx on + off time) x 100
3. Correction factor (㏈) = 10 log (1/duty cycle (㎳))

- 11n_HT20

Band	Power	Frequency (㎒)	Conducted Power (㏈m)							
			Data Rate [MCS]							
			0	1	2	3	4	5	6	7
U-NII 1	Mea. average	5 180	11.59	11.13	11.01	10.76	10.48	10.02	10.10	10.08
	Result		**11.81**	11.54	11.61	11.52	11.56	11.39	11.59	11.63
	Mea. average	5 220	11.56	11.04	11.05	10.68	10.39	9.87	9.95	10.03
	Result		**11.78**	11.45	11.65	11.44	11.47	11.24	11.44	11.58
	Mea. average	5 240	11.61	11.16	10.87	10.79	10.34	9.88	10.12	10.04
	Result		**11.83**	11.57	11.47	11.55	11.42	11.25	11.61	11.59
U-NII 2A	Mea. average	5 260	11.57	10.99	10.98	10.64	10.48	9.91	10.03	10.06
	Result		**11.79**	11.40	11.58	11.40	11.56	11.28	11.52	11.61
	Mea. average	5 300	11.62	11.17	11.04	10.70	10.43	10.03	9.96	9.99
	Result		**11.84**	11.58	11.64	11.46	11.51	11.40	11.45	11.54
	Mea. average	5 320	11.47	10.92	10.63	10.54	10.38	9.99	9.96	9.96
	Result		**11.69**	11.33	11.23	11.30	11.46	11.36	11.51	11.51
U-NII 2C	Mea. average	5 500	11.36	10.88	10.62	10.24	10.29	9.85	9.73	9.69
	Result		**11.58**	11.29	11.22	11.00	11.37	11.22	11.22	11.24
	Mea. average	5 580	11.55	11.01	10.95	10.77	10.33	9.95	10.07	10.11
	Result		**11.77**	11.42	11.55	11.53	11.41	11.32	11.56	11.66
	Mea. average	5 700	11.36	11.03	10.85	10.70	10.39	9.95	9.87	9.96
	Result		**11.58**	11.44	11.45	11.46	11.47	11.32	11.36	11.51

Band	Conducted Power Limit (㏈m)					
	Frequency (㎒)	Fixed Limit (㏈m)	26 dB BW (㎒)	11+10LogB (㏈m)	Antenna gain (㏈i)	Limit (㏈)
U-NII 1	5 180	24				
	5 220	24				
	5 240	24				
U-NII 2A	5 260	24	21.86	24.40	1.01	24
	5 300	24	21.74	24.37	1.01	24
	5 320	24	21.69	24.36	1.01	24
U-NII 2C	5 500	24	21.68	24.36	1.01	24
	5 580	24	21.79	24.38	1.01	24
	5 700	24	22.00	24.42	1.01	24

Mode	Duty cycle							
	Data Rate [MCS]							
11n_HT20	0	1	2	3	4	5	6	7
Duty Cycle (%)	95	91	87	84	78	73	71	70
Correction factor (㏈)	0.22	0.41	0.60	0.76	1.08	1.37	1.49	1.55

Remark:

1. Result (㏈m) = Average (㏈m) + Correction factor (㏈)
2. Duty cycle (%) = (Tx on time / Tx on + off time) x 100
3. Correction factor (㏈) = 10 log (1/duty cycle (㎳))

- 11n_HT40

Band	Power	Frequency (㎒)	Conducted Power (㏈m)							
			Data Rate [MCS]							
			0	1	2	3	4	5	6	7
U-NII 1	Mea. average	5 190	11.34	10.53	10.17	9.87	9.62	9.40	9.05	8.91
	Result		**11.80**	11.34	11.42	11.42	11.42	11.62	11.42	11.35
	Mea. average	5 230	11.27	10.48	10.02	9.92	9.62	9.32	8.96	8.88
	Result		**11.73**	11.29	11.27	11.47	11.42	11.54	11.33	11.32
U-NII 2A	Mea. average	5 270	11.32	10.38	10.12	9.73	9.50	9.27	8.98	8.91
	Result		**11.78**	11.19	11.37	11.28	11.30	11.49	11.35	11.35
	Mea. average	5 310	11.09	10.61	10.12	9.81	9.54	9.13	8.99	8.90
	Result		**11.55**	11.42	11.37	11.36	11.34	11.35	11.36	11.34
U-NII 2C	Mea. average	5 510	10.62	9.84	9.71	9.45	9.13	8.57	8.52	8.22
	Result		**11.08**	10.65	10.96	11.00	10.93	10.79	10.89	10.66
	Mea. average	5 550	11.38	10.52	10.17	9.74	9.53	9.34	8.91	8.89
	Result		**11.84**	11.33	11.42	11.29	11.33	11.56	11.28	11.33
	Mea. average	5 670	10.43	9.54	9.40	8.96	8.74	8.23	7.90	7.81
	Result		**10.89**	10.35	10.65	10.51	10.54	10.45	10.27	10.25

Band	Conducted Power Limit (㏈m)					
	Frequency (㎒)	Fixed Limit (㏈m)	26 dB BW (㎒)	11+10LogB (㏈m)	Antenna gain (㏈i)	Limit (㏈)
U-NII 1	5 190	24				
	5 230	24				
U-NII 2A	5 270	24	40.23	27.05	1.01	24
	5 310	24	40.30	27.05	1.01	24
U-NII 2C	5 510	24	39.97	27.02	1.01	24
	5 550	24	40.02	27.02	1.01	24
	5 670	24	40.00	27.02	1.01	24

Mode	Duty cycle							
	Data Rate [MCS]							
11n_HT40	0	1	2	3	4	5	6	7
Duty Cycle (%)	90	83	75	70	66	60	58	57
Correction factor (㏈)	0.46	0.81	1.25	1.55	1.80	2.22	2.37	2.44

Remark:

1. Result (㏈m) = Average (㏈m) + Correction factor (㏈)
2. Duty cycle (%) = (Tx on time / Tx on + off time) x 100
3. Correction factor (㏈) = 10 log (1/duty cycle (㎳))

- 11ac_VHT20

Band	Power	Frequency (㎒)	Conducted Power (㏈m)								
			Data Rate [MCS]								
			0	1	2	3	4	5	6	7	8
U-NII 1	Mea. average	5 180	10.17	9.58	9.41	9.46	9.06	8.89	8.83	8.71	8.61
	Result		**10.39**	9.99	10.07	10.22	10.14	10.20	10.32	10.26	10.35
	Mea. average	5 220	10.11	9.57	9.40	9.31	8.95	8.78	8.79	8.63	8.45
	Result		**10.33**	9.98	10.06	10.07	10.03	10.09	10.28	10.18	10.19
	Mea. average	5 240	10.14	9.62	9.40	9.47	8.94	8.92	8.73	8.59	8.60
	Result		**10.36**	10.03	10.06	10.23	10.02	10.23	10.22	10.14	10.34
U-NII 2A	Mea. average	5 260	10.08	9.51	9.36	9.49	9.11	8.75	8.87	8.66	8.41
	Result		**10.30**	9.92	10.02	10.25	10.19	10.06	10.36	10.21	10.15
	Mea. average	5 300	10.22	9.61	9.38	9.42	9.01	8.77	8.88	8.64	8.64
	Result		**10.44**	10.02	10.04	10.18	10.09	10.08	10.37	10.19	10.38
	Mea. average	5 320	10.28	9.90	9.50	9.60	9.28	8.84	8.64	8.38	8.54
	Result		**10.50**	10.31	10.16	10.36	10.36	10.15	10.19	9.93	10.28
U-NII 2C	Mea. average	5 500	10.44	10.03	9.73	9.51	9.48	9.15	8.76	8.73	8.85
	Result		**10.66**	10.44	10.39	10.27	10.56	10.46	10.25	10.28	10.59
	Mea. average	5 580	10.21	9.48	9.32	9.34	9.09	8.86	8.86	8.65	8.63
	Result		**10.43**	9.89	9.98	10.10	10.17	10.17	10.35	10.20	10.37
	Mea. average	5 700	10.05	9.53	9.37	9.26	9.02	8.72	8.66	8.66	8.64
	Result		10.27	9.94	10.03	10.02	10.10	10.03	10.15	10.21	10.23

Band	Conducted Power Limit (㏈m)					
	Frequency (㎒)	Fixed Limit (㏈m)	26 dB BW (㎒)	11+10LogB (㏈m)	Antenna gain (㏈i)	Limit (㏈)
U-NII 1	5 180	24				
	5 220	24				
	5 240	24				
U-NII 2A	5 260	24	21.85	24.39	1.01	24
	5 300	24	21.67	24.36	1.01	24
	5 320	24	21.56	24.34	1.01	24
U-NII 2C	5 500	24	21.60	24.34	1.01	24
	5 580	24	21.81	24.39	1.01	24
	5 700	24	21.82	24.39	1.01	24

Mode	Duty cycle								
	Data Rate [MCS]								
11ac_VHT20	0	1	2	3	4	5	6	7	8
Duty Cycle (%)	95	91	86	84	78	74	71	70	67
Correction factor (㏈)	0.22	0.41	0.66	0.76	1.08	1.31	1.55	1.55	1.74

Remark:

1. Result (㏈m) = Average (㏈m) + Correction factor (㏈)
2. Duty cycle (%) = (Tx on time / Tx on + off time) x 100
3. Correction factor (㏈) = 10 log (1/duty cycle (㎳))

- 11ac_VHT40

Band	Power	Frequency (㎒)	Conducted Power (㏈m)									
			Data Rate [MCS]									
			0	1	2	3	4	5	6	7	8	9
U-NII 1	Mea. average	5 190	10.27	9.44	9.10	9.06	8.49	8.13	7.85	7.81	7.84	7.62
	Result		**10.73**	10.25	10.29	10.43	10.29	10.21	10.37	10.25	10.44	10.46
	Mea. average	5 230	10.12	9.33	9.06	9.10	8.34	8.02	7.88	7.74	7.79	7.49
	Result		**10.58**	10.14	10.25	10.47	10.14	10.10	10.40	10.18	10.39	10.33
U-NII 2A	Mea. average	5 270	10.16	9.33	9.07	8.95	8.54	8.11	7.83	7.75	7.87	7.54
	Result		**10.62**	10.14	10.26	10.32	10.34	10.19	10.35	10.19	10.47	10.38
	Mea. average	5 310	10.36	9.90	9.21	9.03	8.87	8.12	7.98	7.93	7.89	7.73
	Result		**10.82**	10.71	10.40	10.40	10.67	10.20	10.50	10.37	10.49	10.57
U-NII 2C	Mea. average	5 510	9.79	9.21	8.77	8.40	8.13	7.86	7.49	7.47	7.48	7.32
	Result		**10.25**	10.02	9.96	9.77	9.93	9.94	10.01	9.91	10.08	10.16
	Mea. average	5 550	10.32	9.39	9.12	8.94	8.46	8.05	7.85	7.86	7.78	7.63
	Result		**10.78**	10.20	10.31	10.31	10.26	10.13	10.37	10.30	10.38	10.47
	Mea. average	5 670	9.43	8.93	8.55	8.20	7.72	7.51	7.30	7.15	7.02	6.90
	Result		**9.89**	9.74	9.74	9.57	9.52	9.59	9.82	9.59	9.62	9.74

Band	Conducted Power Limit (㏈m)					
	Frequency (㎒)	Fixed Limit (㏈m)	26 dB BW (㎒)	11+10LogB (㏈m)	Antenna gain (㏈i)	Limit (㏈)
U-NII 1	5 190	24				
	5 230	24				
U-NII 2A	5 270	24	39.66	26.98	1.01	24
	5 310	24	40.04	27.02	1.01	24
U-NII 2C	5 510	24	40.23	27.05	1.01	24
	5 550	24	40.46	27.07	1.01	24
	5 670	24	39.80	27.00	1.01	24

Mode	Duty cycle									
	Data Rate [MCS]									
11ac_VHT40	0	1	2	3	4	5	6	7	8	9
Duty Cycle (%)	90	83	76	73	66	62	56	57	55	52
Correction factor (㏈)	0.46	0.81	1.19	1.37	1.80	2.08	2.52	2.44	2.60	2.84

Remark:

1. Result (㏈m) = Average (㏈m) + Correction factor (㏈)
2. Duty cycle (%) = (Tx on time / Tx on + off time) x 100
3. Correction factor (㏈) = 10 log (1/duty cycle (㎳))

- 11ac_VHT80

Band	Power	Frequency (㎒)	Conducted Power (㏈m)									
			Data Rate [MCS]									
			0	1	2	3	4	5	6	7	8	9
U-NII 1	Mea. Average	5 210	9.25	8.57	7.82	7.64	7.25	6.69	6.44	6.09	6.29	6.19
	Result		**10.11**	10.06	9.76	9.86	10.09	9.70	9.72	9.86	9.86	10.06
U-NII 2A	Mea. Average	5 290	9.49	8.59	8.24	7.82	7.46	7.08	6.80	6.26	6.39	6.26
	Result		**10.35**	10.08	10.18	10.04	10.30	10.09	10.08	10.03	9.96	10.13
U-NII 2C	Mea. Average	5 530	9.70	8.76	8.33	7.91	7.62	7.25	6.91	6.42	6.61	6.36
	Result		**10.56**	10.25	10.27	10.13	10.46	10.26	10.19	10.19	10.18	10.23

Band	Conducted Power Limit (㏈m)					
	Frequency (㎒)	Fixed Limit (㏈m)	26 dB BW (㎒)	11+10LogB (㏈m)	Antenna gain (㏈i)	Limit (㏈)
U-NII 1	5 210	24				
U-NII 2A	5 290	24	81.95	30.14	1.01	24
U-NII 2C	5 530	24	82.34	30.16	1.01	24

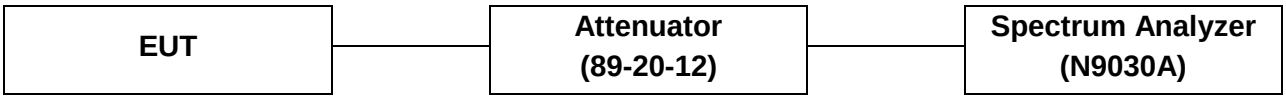
Mode	Duty cycle									
	Data Rate [MCS]									
11ac_VHT80	0	1	2	3	4	5	6	7	8	9
Duty Cycle (%)	82	71	64	60	52	50	47	42	44	41
Correction factor (dB)	0.86	1.49	1.94	2.22	2.84	3.01	3.28	3.77	3.57	3.87

Remark:

1. Result (㏈m) = Average (㏈m) + Correction factor (㏈)
2. Duty cycle (%) = (Tx on time / Tx on + off time) x 100
3. Correction factor (㏈) = 10 log (1/duty cycle (㎳))

5. Peak power spectral density

5.1. Test setup



5.2. Limit

5.2.1. FCC 15.407

(a)(1)(iv)

For mobile and portable client devices in the 5.15 - 5.25 ㎓ band, the maximum conducted output power over the frequency band of operation shall not exceed 250 ㎽ provided the maximum antenna gain does not exceed 6 ㏈i. In addition, the maximum power spectral density shall not exceed 11 ㏈m in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 ㏈i are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in ㏈ that the directional gain of the antenna exceeds 6 ㏈i.

(a)(2)

For the 5.25 - 5.35 ㎓ and 5.47 - 5.725 ㎓ bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 ㎽ or 11 ㏈m 10 log B, where B is the 26 ㏈ emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 ㏈m in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 ㏈i are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in ㏈ that the directional gain of the antenna exceeds 6 ㏈i.

5.3. 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.

1. This measurement settings are specified in section F of KDB 789033 D02 v01.

2. Create an average power spectrum for the EUT operating mode being tested by following the instructions in section II.E.2. for measuring maximum conducted output power using a spectrum analyzer or EMI receiver: select the appropriate test method (SA-1, SA-2, SA-3, or alternatives to each) and apply it up to, but not including, the step labeled, “Compute power…”. (This procedure is required even if the maximum conducted output power measurement was performed using a power meter, method PM.)

3. Use the peak search function on the instrument to find the peak of the spectrum and record its value.

4. Make the following adjustments to the peak value of the spectrum, if applicable:

a) **If Method SA-2 or SA-2 Alternative was used, add 10 log(1/x), where x is the duty cycle, to the peak of the spectrum.**

b) If Method SA-3 Alternative was used and the linear mode was used in step II.E.2.g)(viii), add 1 dB to the final result to compensate for the difference between linear averaging and power averaging.

5. The result is the Maximum PSD over 1 ㎒ reference bandwidth.

6. For devices operating in the bands 5.15-5.25 ㎓, 5.25-5.35 ㎓, and 5.47-5.725 ㎓, the above procedures make use of 1 ㎒ RBW to satisfy directly the 1 ㎒ reference bandwidth specified in § 15.407(a)(5). Many spectrum analyzers do not have 500 ㎑ RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 ㎒, or 500 ㎑, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (*i.e.,* 1 ㎒, or 500 ㎑). If measurements are performed using a reduced resolution bandwidth (< 1 ㎒, or < 500 ㎑) and integrated over 1 ㎒, or 500 ㎑ bandwidth, the following adjustments to the procedures apply:

a) Set RBW ≥ 1/*T*, where *T* is defined in section II.B.l.a).

b) Set VBW ≥ 3 RBW.

c) If measurement bandwidth of Maximum PSD is specified in 500 ㎑, add 10log(500 ㎑/RBW) to the measured result, whereas RBW (< 500 ㎑) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

d) If measurement bandwidth of Maximum PSD is specified in 1 ㎒, add 10log(1 ㎒/RBW) to the measured result, whereas RBW (< 1 ㎒) is the reduced resolution bandwidth of spectrum analyzer set during measurement.

e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 ㎑ for the sections 5.c) and 5.d) above, since RBW = 100 ㎑ is available on nearly all spectrum analyzers.

5.4. Test result

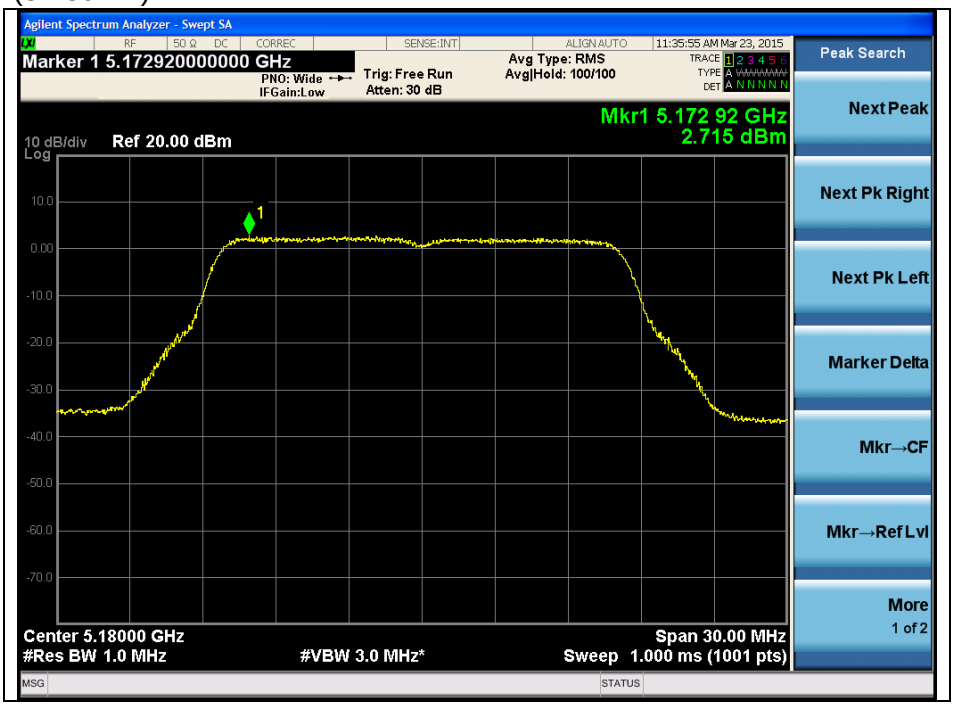
Ambient temperature : (23 ± 1) ℃
Relative humidity : 47 % R.H.

Band	Mode	Frequency (㎒)	Ch.	Data Rate	Measured PPSD (dB m)	Duty Factor (dB)	Final PPSD (dB m)	Limit (dB m/㎒)
U-NII 1	11a	5 180	36	6	2.72	0.22	2.94	11
		5 220	44	6	1.30	0.22	1.52	11
		5 240	48	6	1.16	0.22	1.38	11
	11n_HT20	5 180	36	MCS0	1.12	0.22	1.34	11
		5 220	44	MCS0	-0.07	0.22	0.15	11
		5 240	48	MCS0	0.01	0.22	0.23	11
	11n_HT40	5 190	38	MCS0	-0.82	0.46	-0.36	11
		5 230	46	MCS0	-2.36	0.46	-1.90	11
	11ac_VHT20	5 180	36	MCS0	0.36	0.22	0.58	11
		5 220	44	MCS0	-0.94	0.22	-0.72	11
		5 240	48	MCS0	-1.23	0.22	-1.01	11
	11ac_VHT40	5 190	38	MCS0	-2.06	0.46	-1.60	11
		5 230	46	MCS0	-3.71	0.46	-3.25	11
	11ac_VHT80	5 210	42	MCS0	-6.89	0.86	-6.03	11
U-NII 2A	11a	5 260	52	6	1.44	0.22	1.66	11
		5 300	60	6	1.28	0.22	1.50	11
		5 320	64	6	0.84	0.22	1.06	11
	11n_HT20	5 260	52	MCS0	0.05	0.22	0.27	11
		5 300	60	MCS0	-0.31	0.22	-0.09	11
		5 320	64	MCS0	-0.48	0.22	-0.26	11
	11n_HT40	5 270	54	MCS0	-2.34	0.46	-1.88	11
		5 310	62	MCS0	-2.75	0.46	-2.29	11
	11ac_VHT20	5 260	52	MCS0	-0.90	0.22	-0.68	11
		5 300	60	MCS0	-1.15	0.22	-0.93	11
		5 320	64	MCS0	-1.30	0.22	-1.08	11
	11ac_VHT40	5 270	54	MCS0	-3.51	0.46	-3.05	11
		5 310	62	MCS0	-3.83	0.46	-3.37	11
	11ac_VHT80	5 290	58	MCS0	-7.37	0.86	-6.51	11
U-NII 2C	11a	5 500	134	6	1.17	0.22	1.39	11
		5 580	106	6	2.02	0.22	2.24	11
		5 700	140	6	1.00	0.22	1.22	11
	11n_HT20	5 500	100	MCS0	-0.14	0.22	0.08	11
		5 580	116	MCS0	0.86	0.22	1.08	11
		5 700	140	MCS0	0.63	0.22	0.85	11
	11n_HT40	5 510	102	MCS0	-3.07	0.46	-2.61	11
		5 550	110	MCS0	-2.46	0.46	-2.00	11
		5 670	134	MCS0	-2.21	0.46	-1.75	11
	11ac_VHT20	5 500	100	MCS0	-1.00	0.22	-0.78	11
		5 580	116	MCS0	-0.10	0.22	0.12	11
		5 700	140	MCS0	-0.49	0.22	-0.27	11
	11ac_VHT40	5 510	102	MCS0	-4.27	0.46	-3.81	11
		5 550	110	MCS0	-3.60	0.46	-3.14	11
		5 670	134	MCS0	-3.14	0.46	-2.68	11
	11ac_VHT80	5 530	106	MCS0	-6.93	0.86	-6.07	11

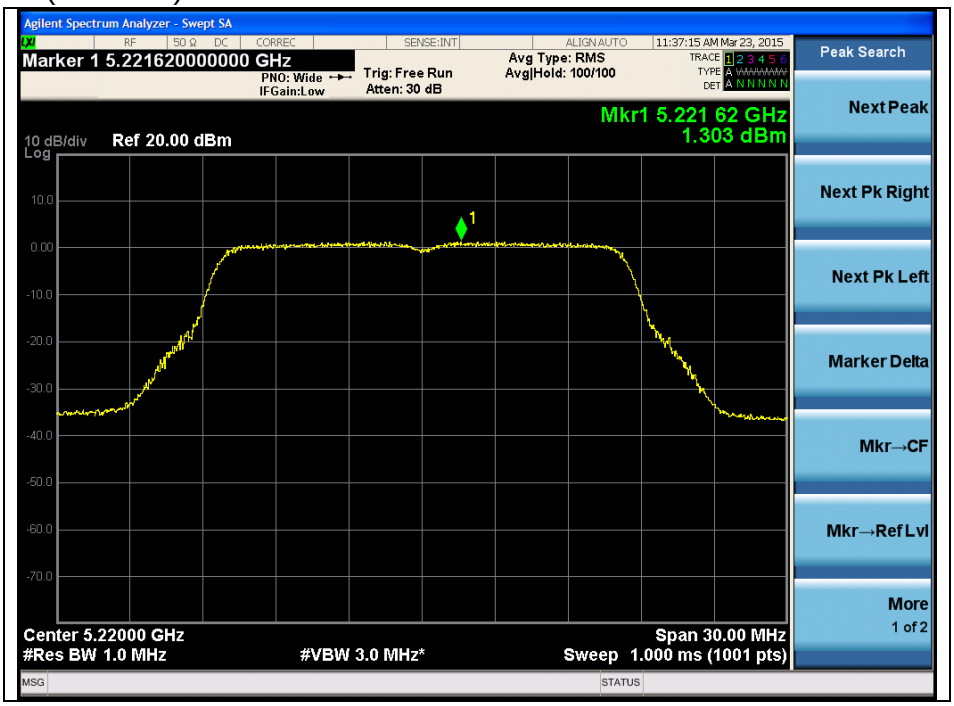
Note: Final PPSD = Measured PPSD + Duty Factor

802.11a (Band 1)

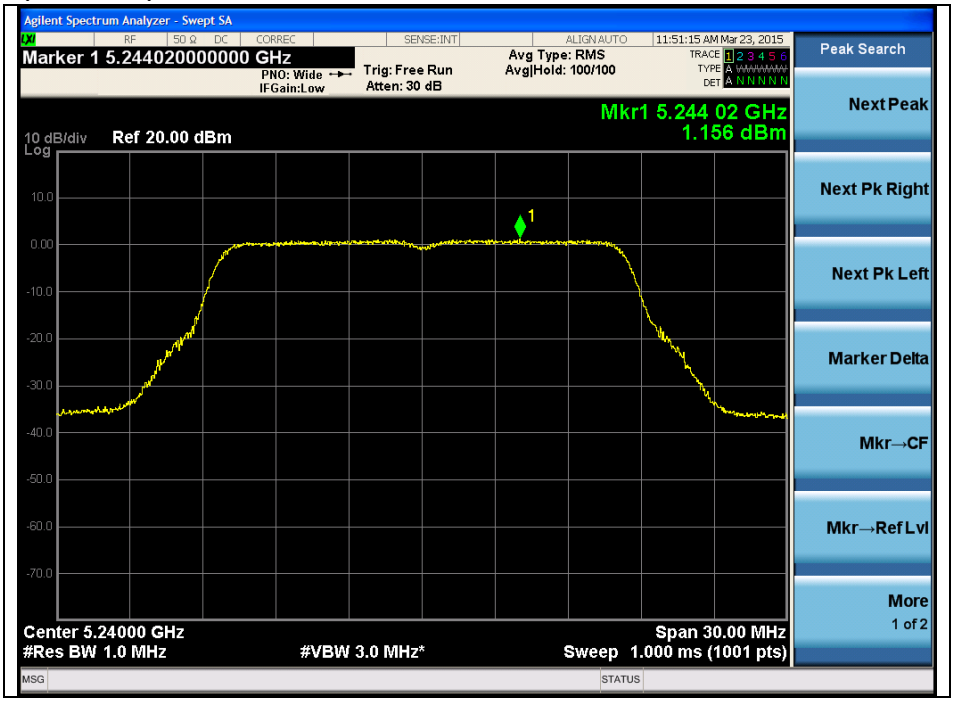
Low Channel (5 180 ㎒)



Middle Channel (5 220 ㎒)

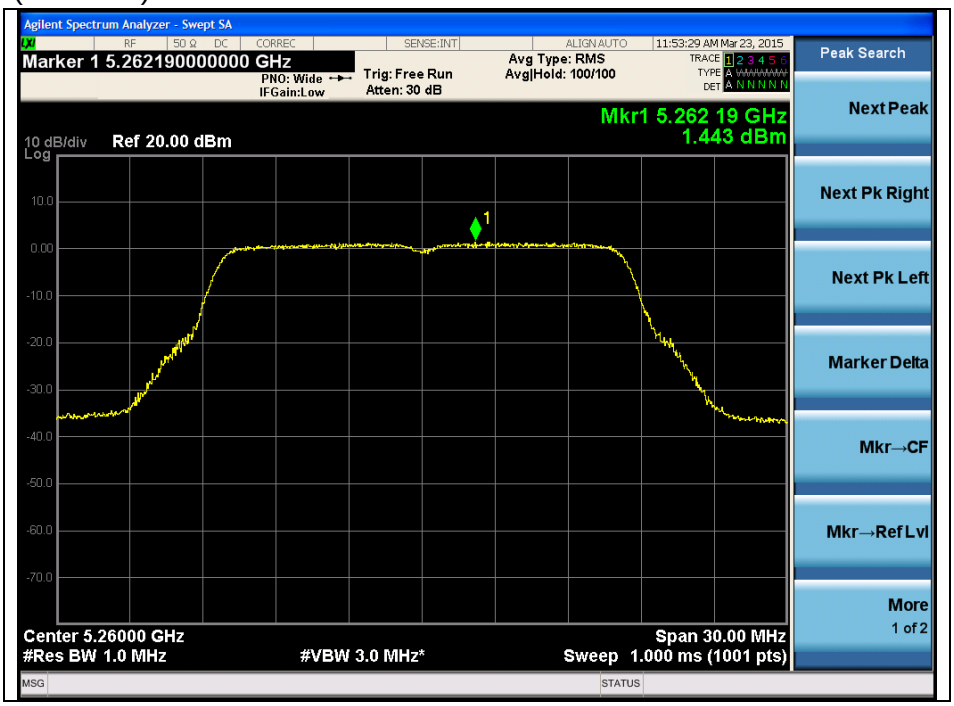


High Channel (5 240 ㎒)

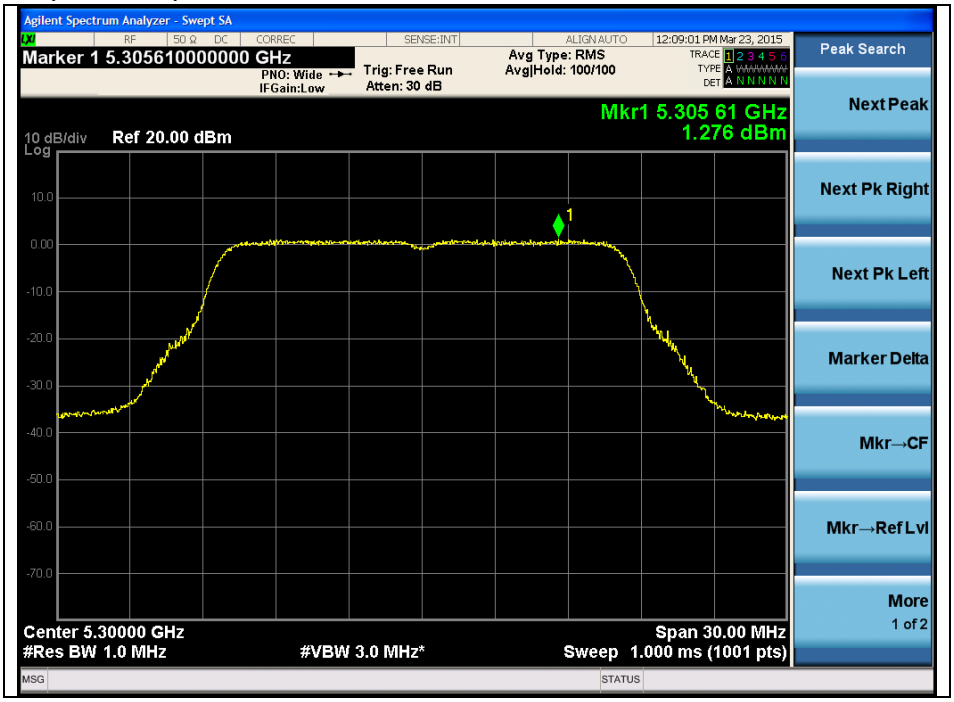


802.11a (Band 2A)

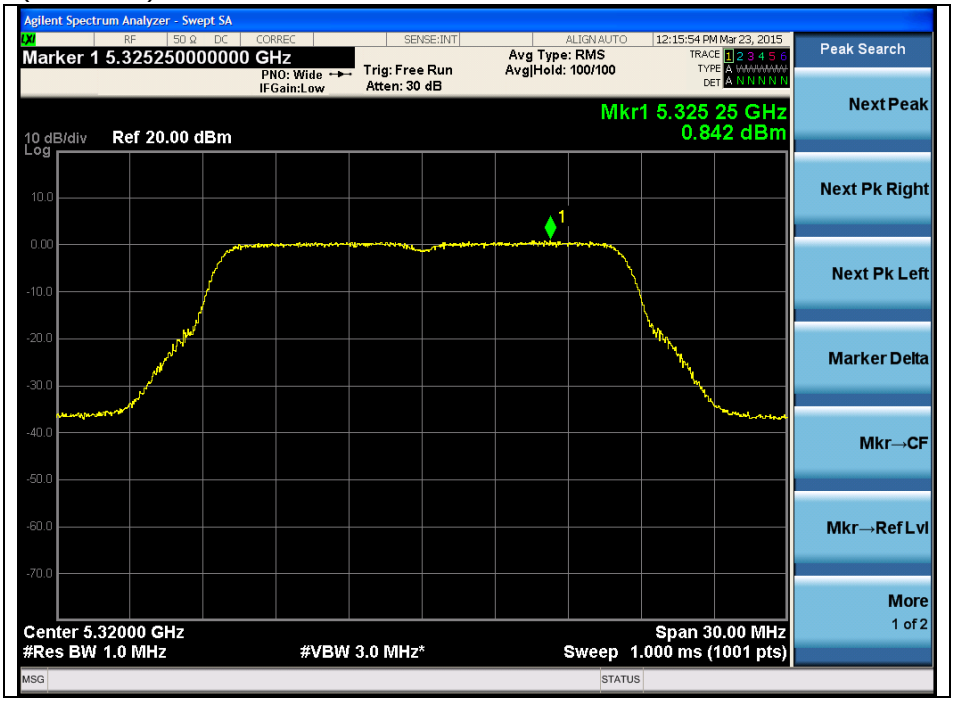
Low Channel (5 260 ㎒)



Middle Channel (5 300 ㎒)

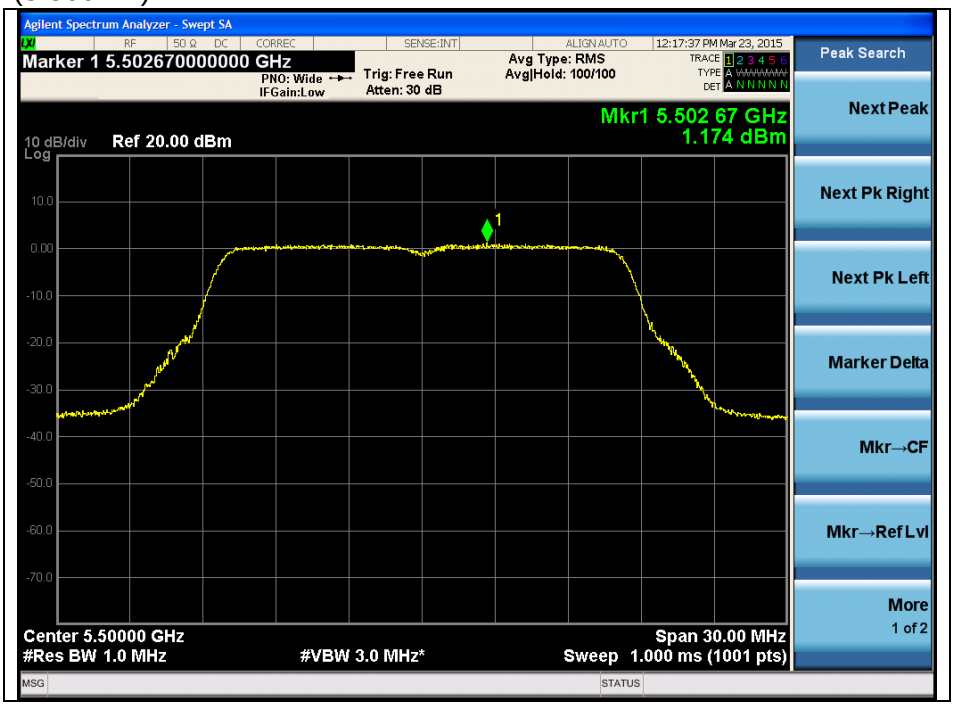


High Channel (5 320 ㎒)

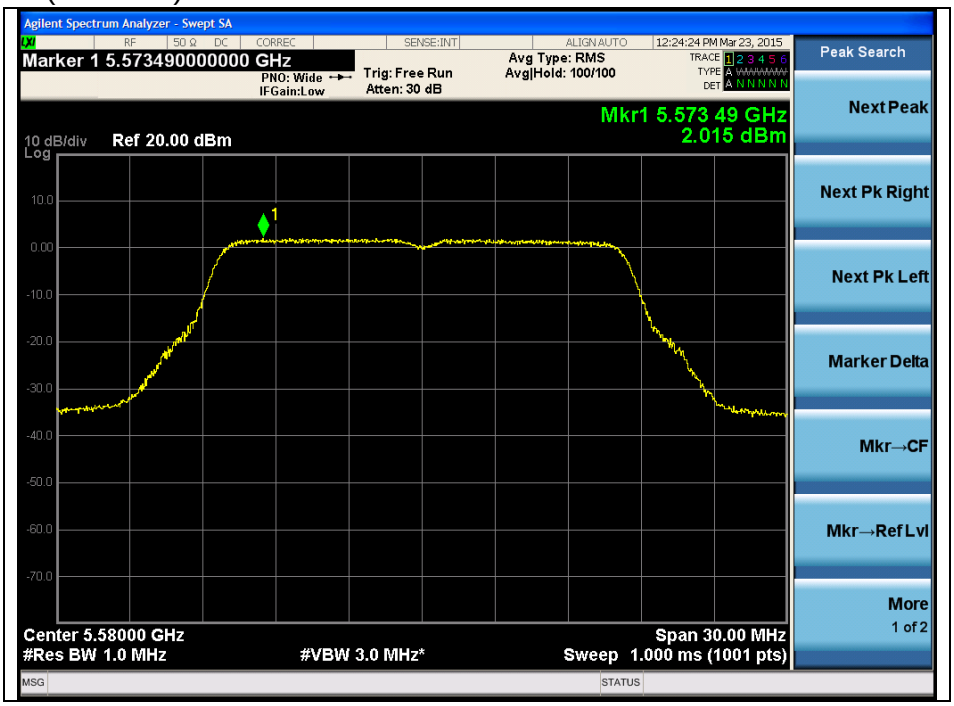


802.11a (Band 2C)

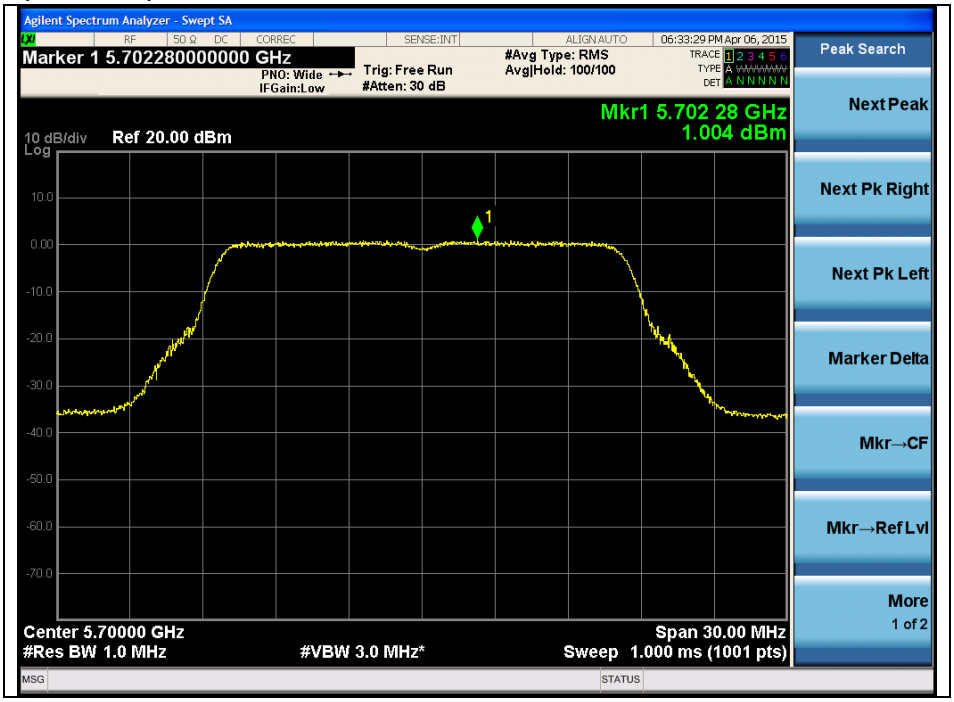
Low Channel (5 500 ㎒)



Middle Channel (5 580 ㎒)

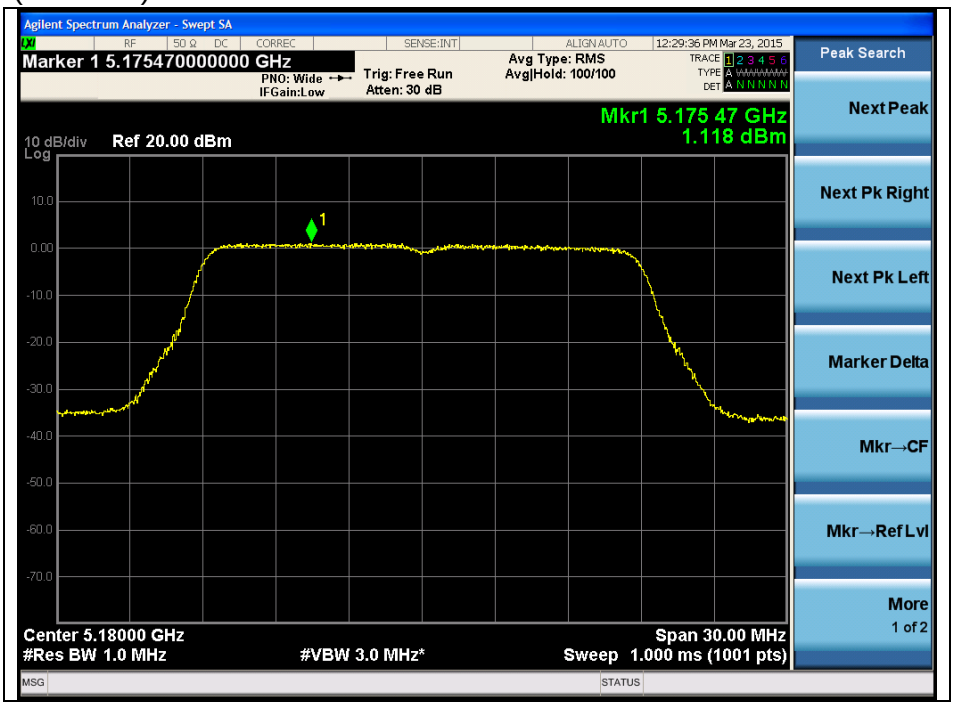


High Channel (5 700 ㎒)

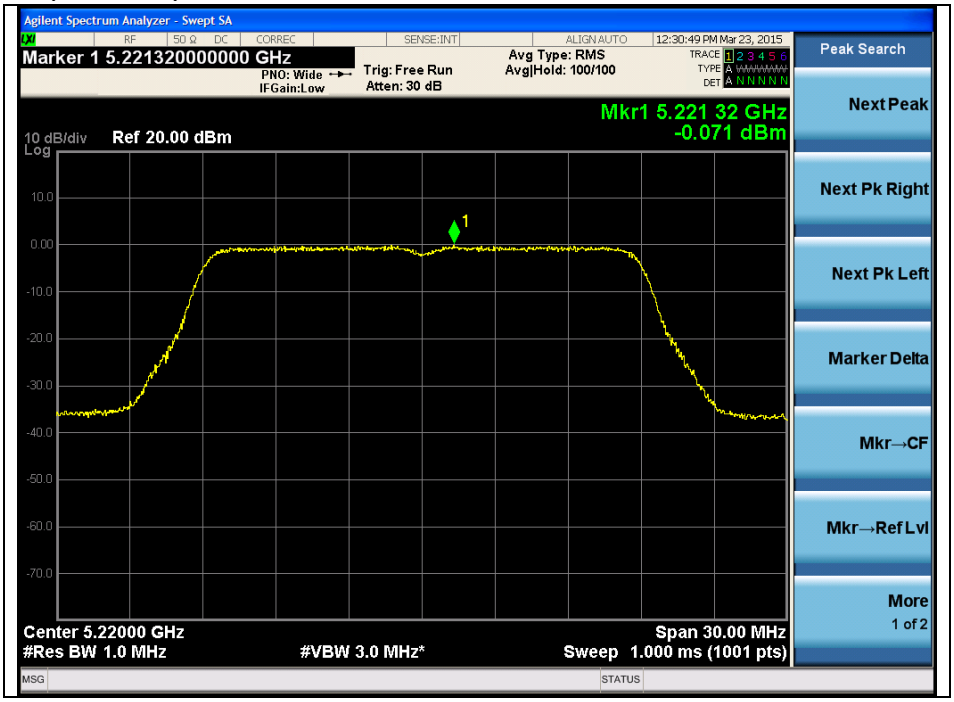


802.11n_HT20 (Band 1)

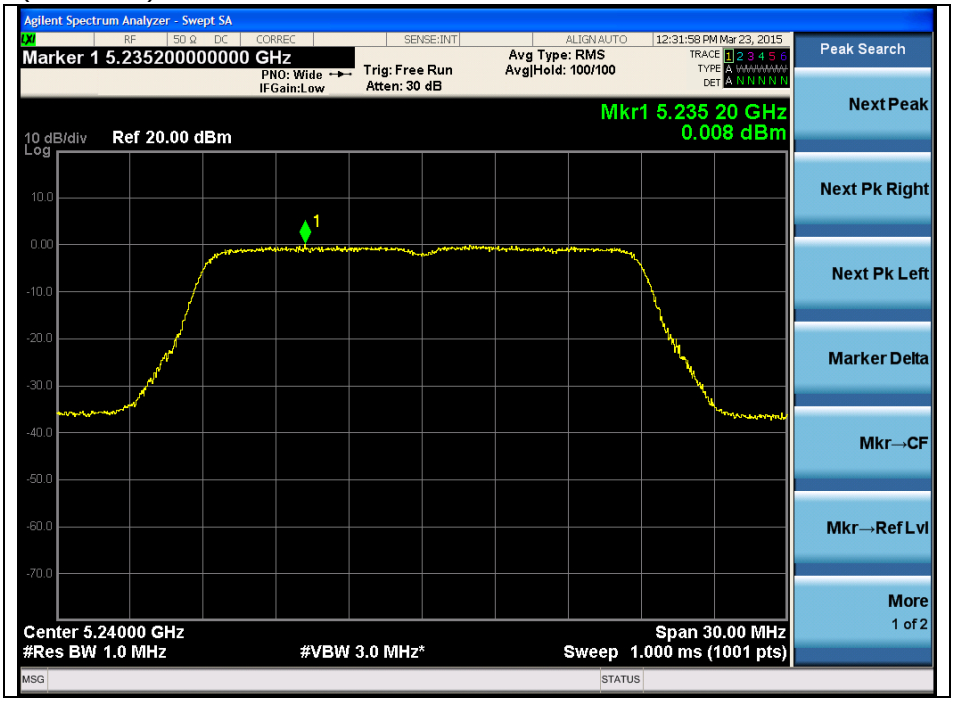
Low Channel (5 180 ㎒)



Middle Channel (5 220 ㎒)

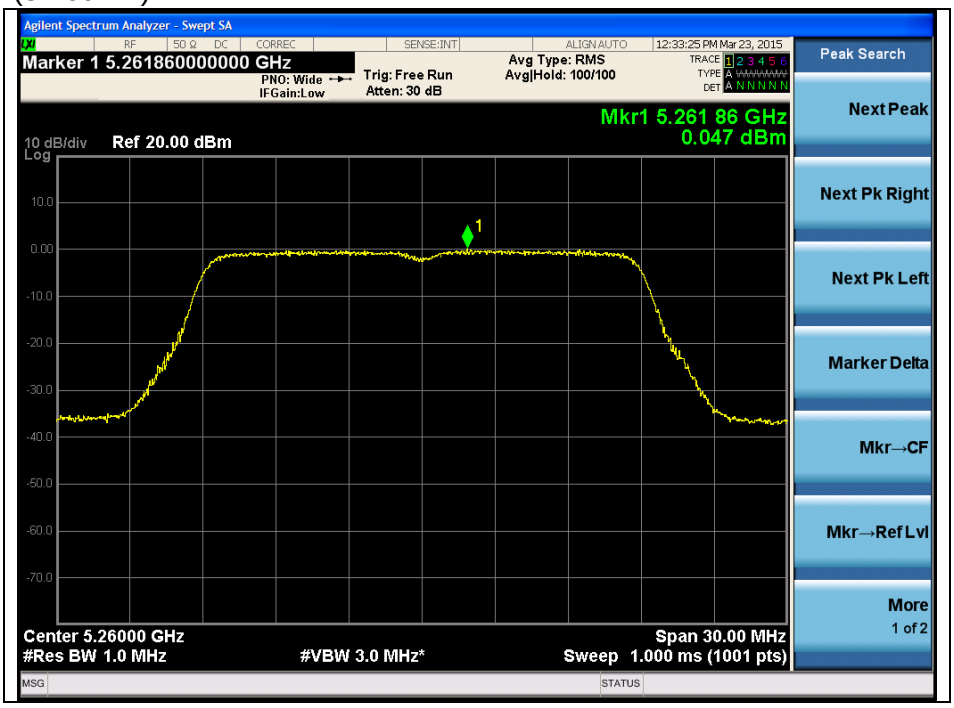


High Channel (5 240 ㎒)

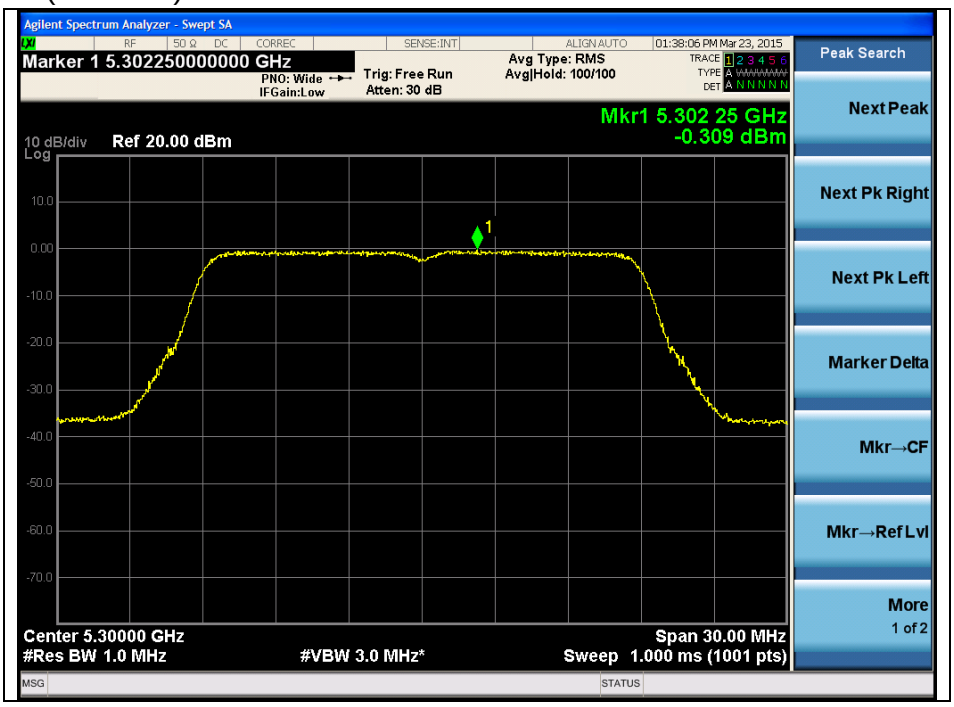


802.11n_HT20 (Band 2A)

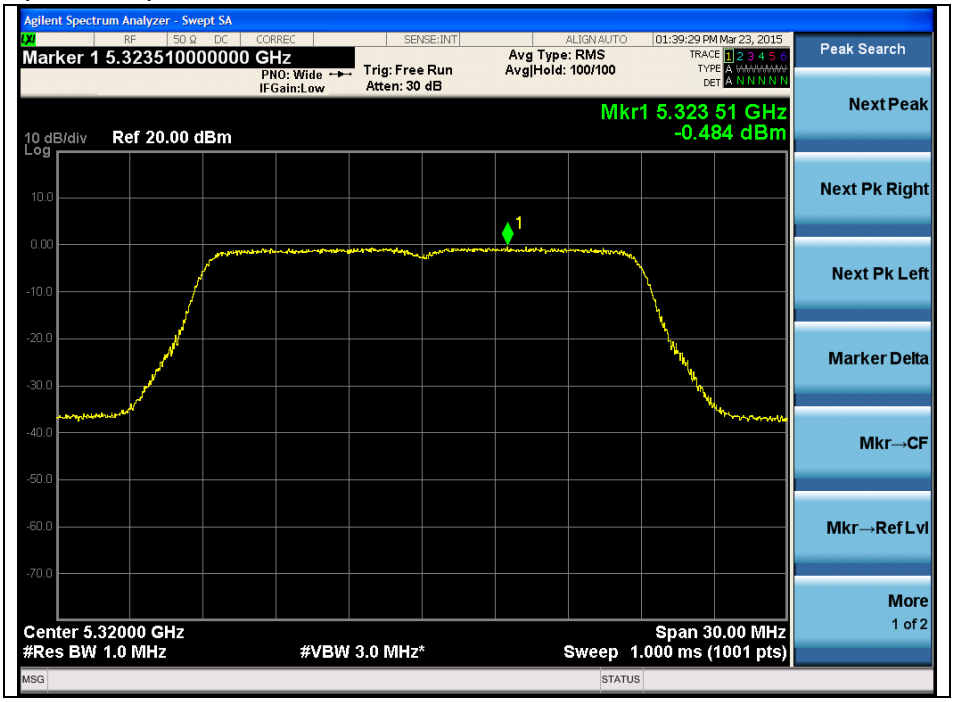
Low Channel (5 260 ㎒)



Middle Channel (5 300 ㎒)

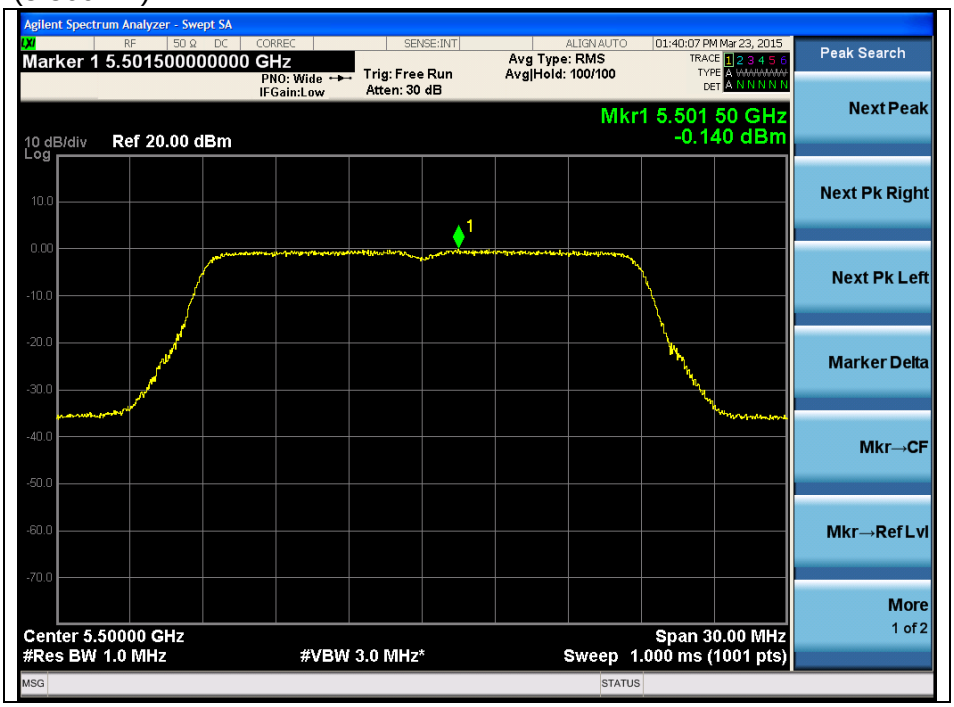


High Channel (5 320 ㎒)

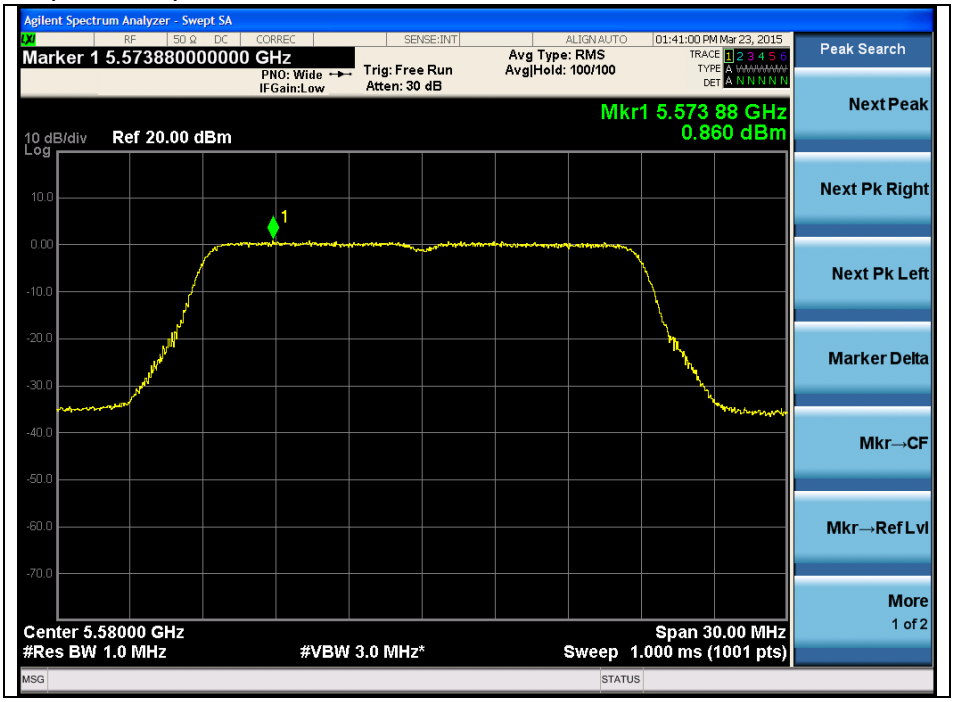


802.11n_HT20 (Band 2C)

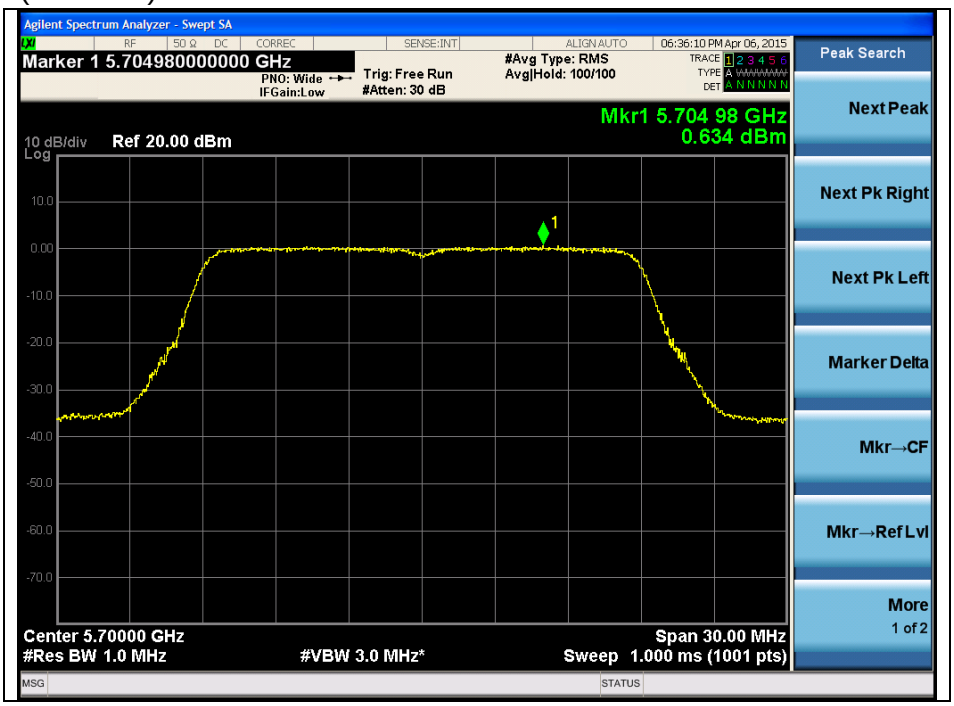
Low Channel (5 500 ㎒)



Middle Channel (5 580 ㎒)

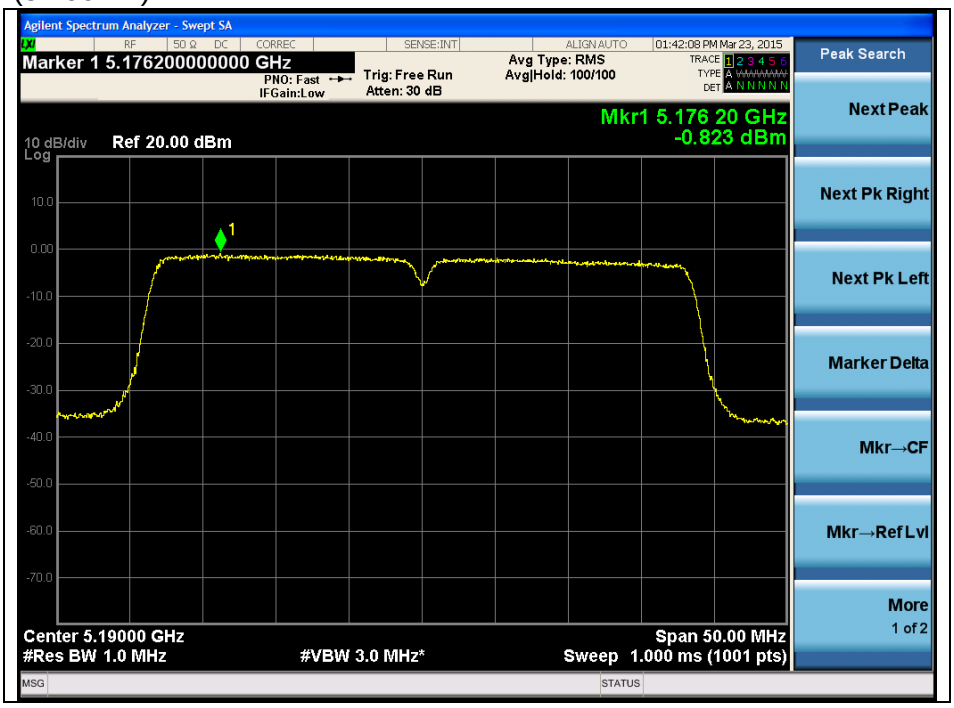


High Channel (5 700 ㎒)

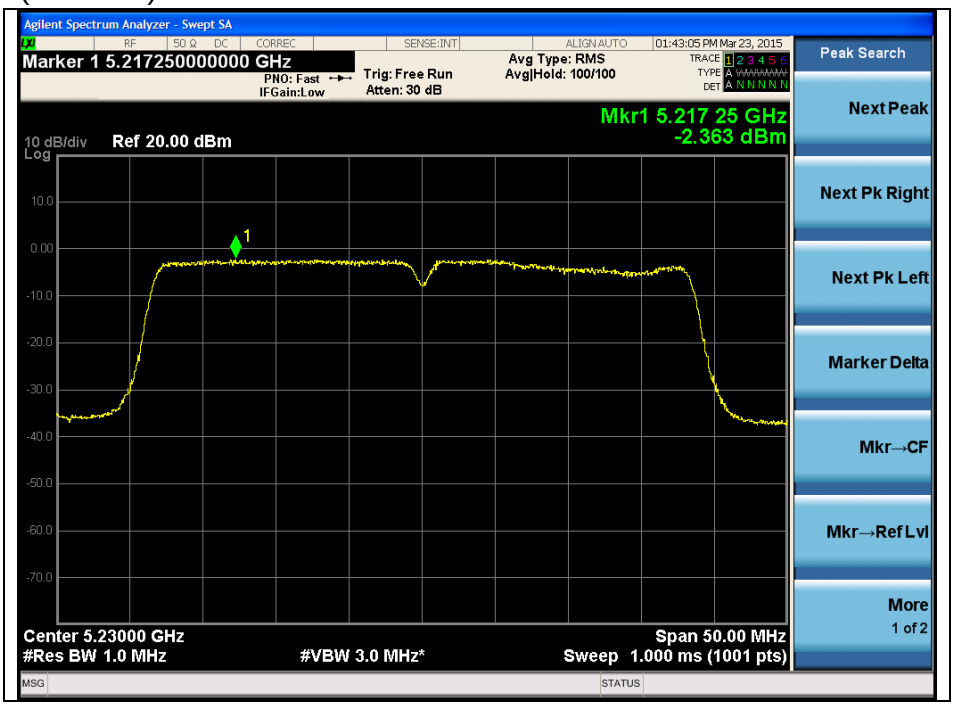


802.11n_HT40 (Band 1)

Low Channel (5 190 ㎒)

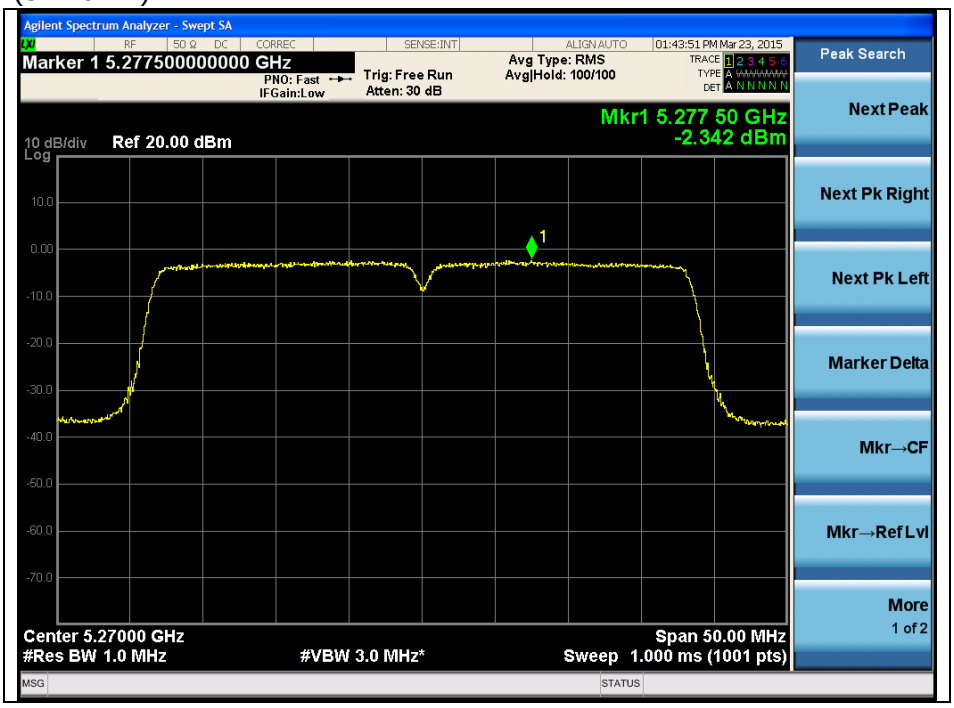


High Channel (5 230 ㎒)

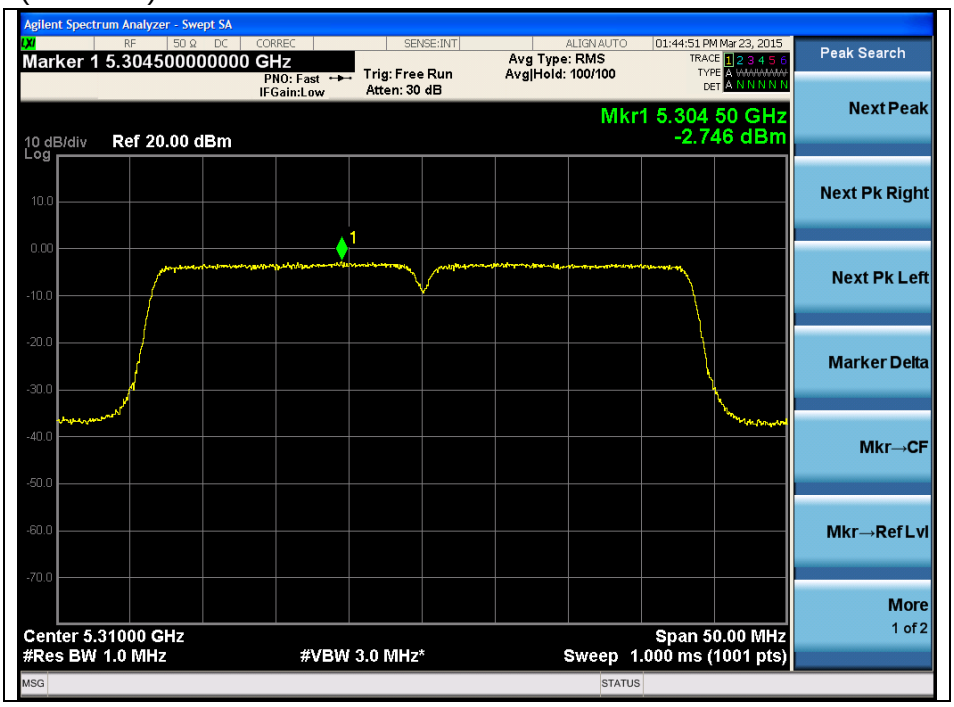


802.11n_HT40 (Band 2A)

Low Channel (5 270 ㎒)

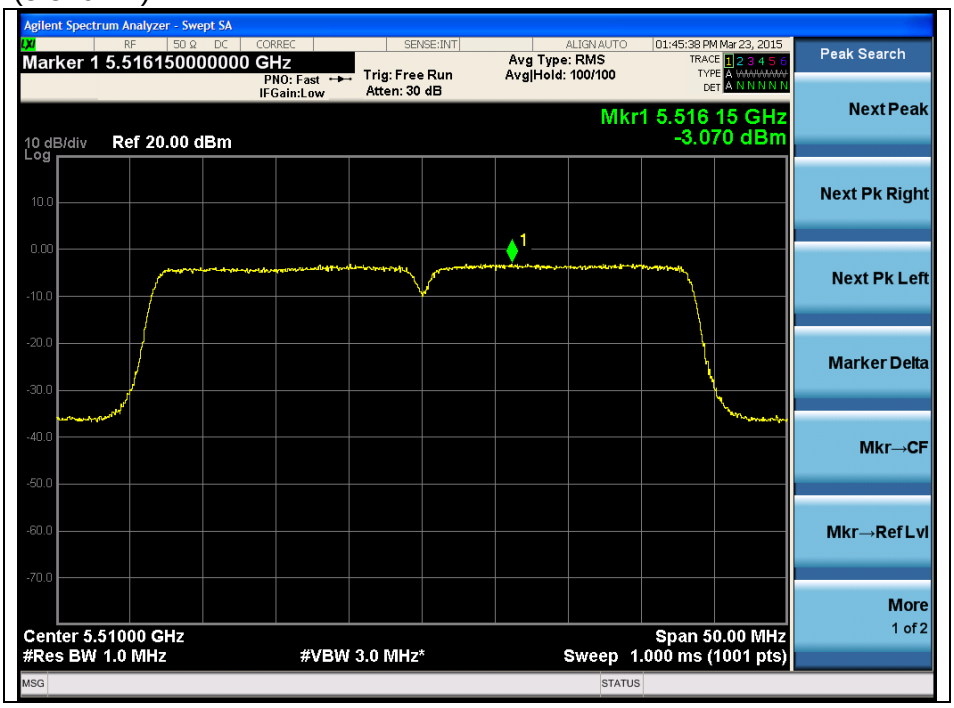


High Channel (5 310 ㎒)

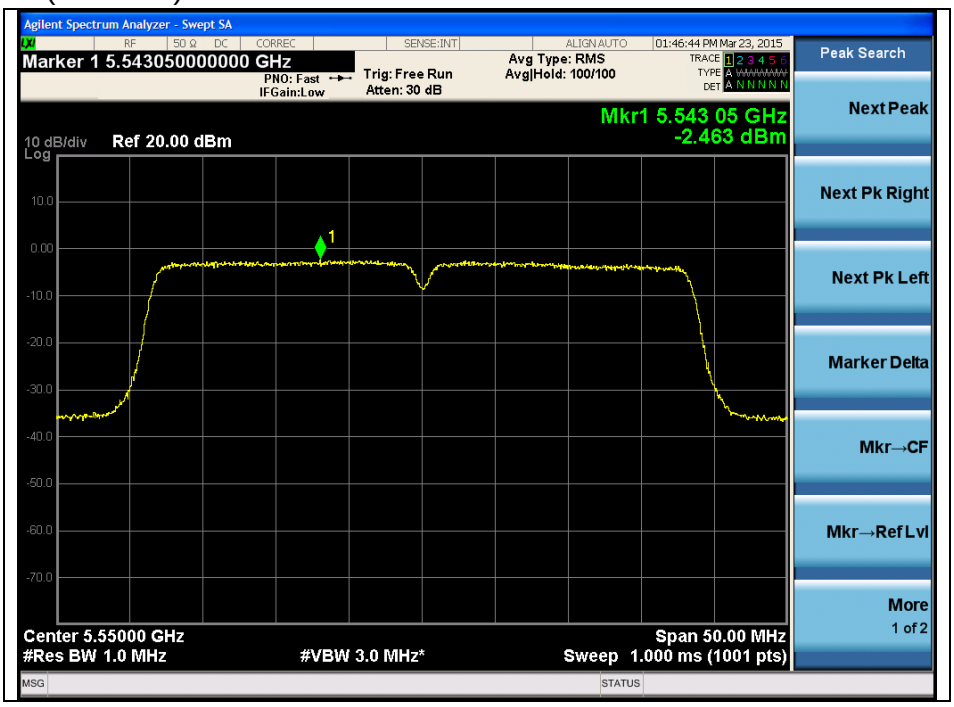


802.11n_HT40 (Band 2C)

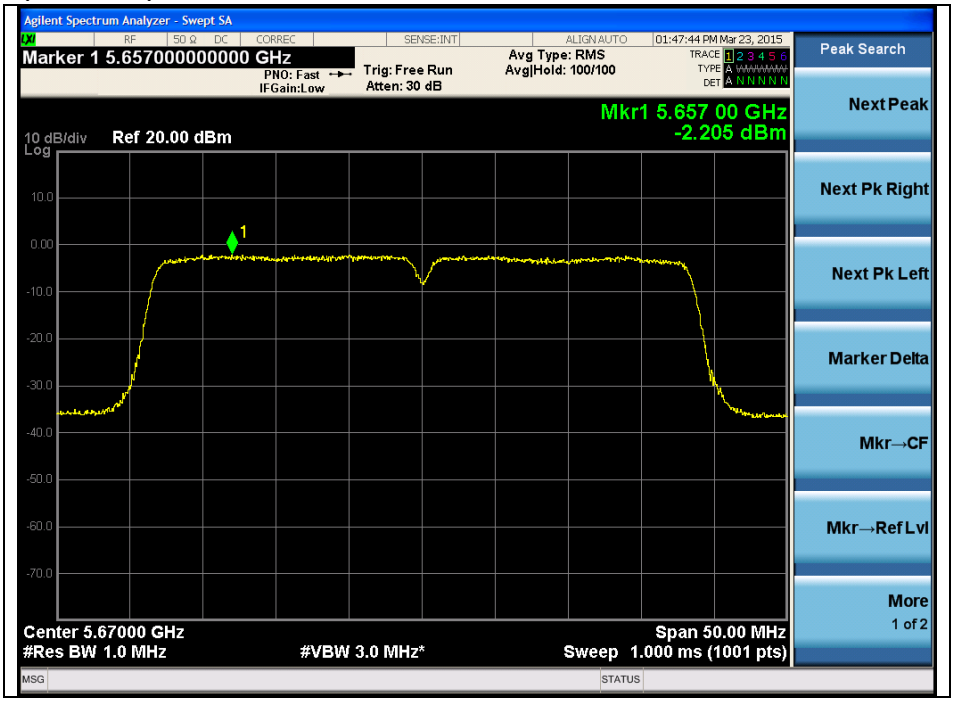
Low Channel (5 510 ㎒)



Middle Channel (5 550 ㎒)

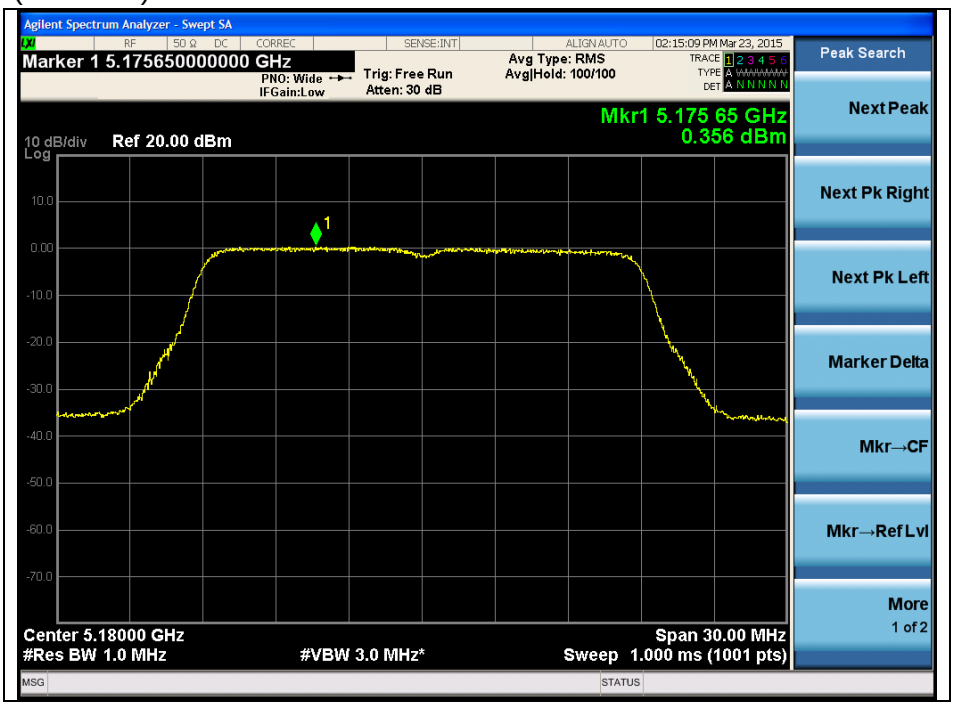


High Channel (5 670 ㎒)

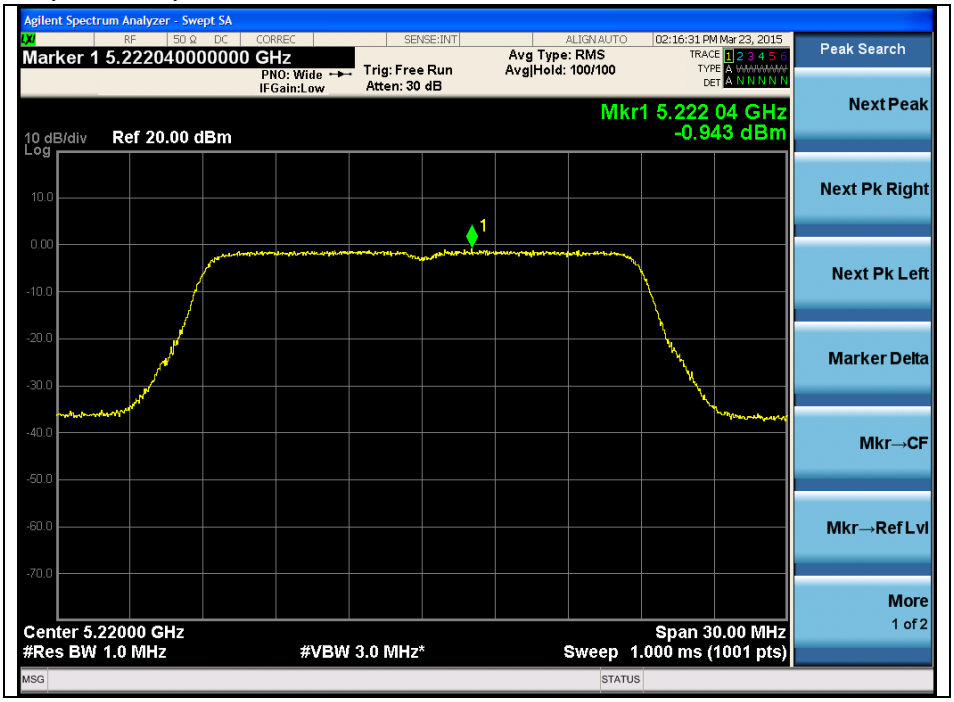


802.11ac_VHT20 (Band 1)

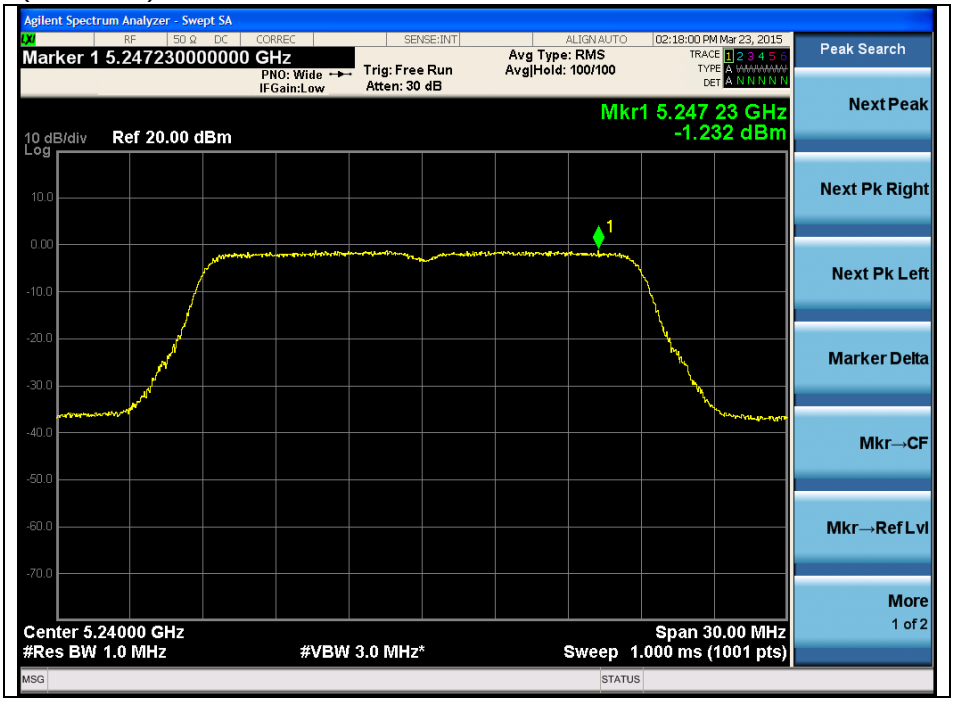
Low Channel (5 180 ㎒)



Middle Channel (5 220 ㎒)

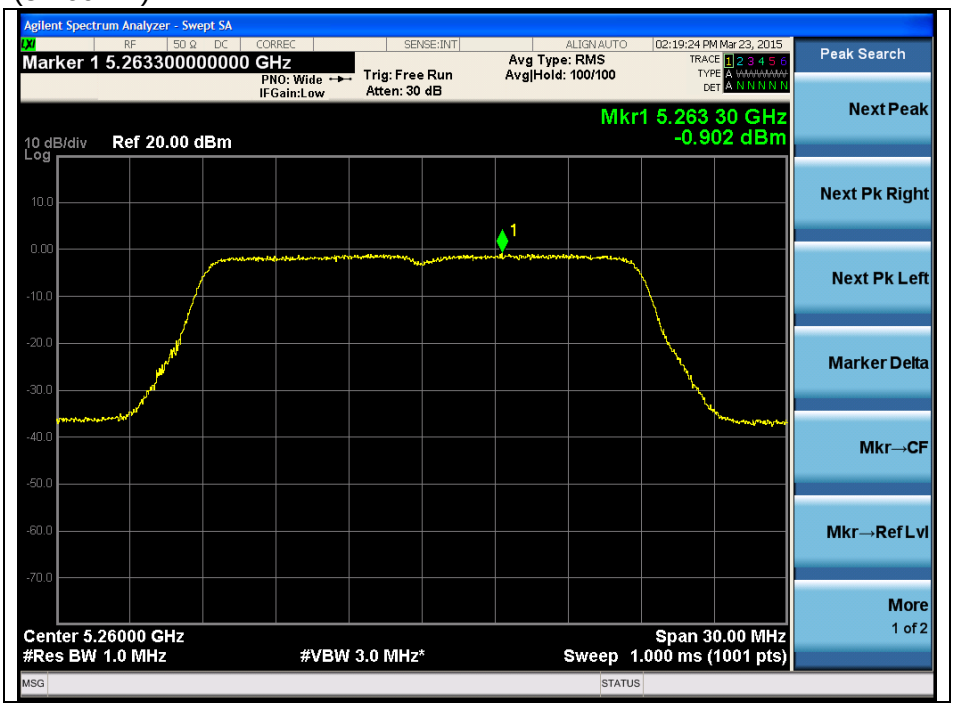


High Channel (5 240 ㎒)

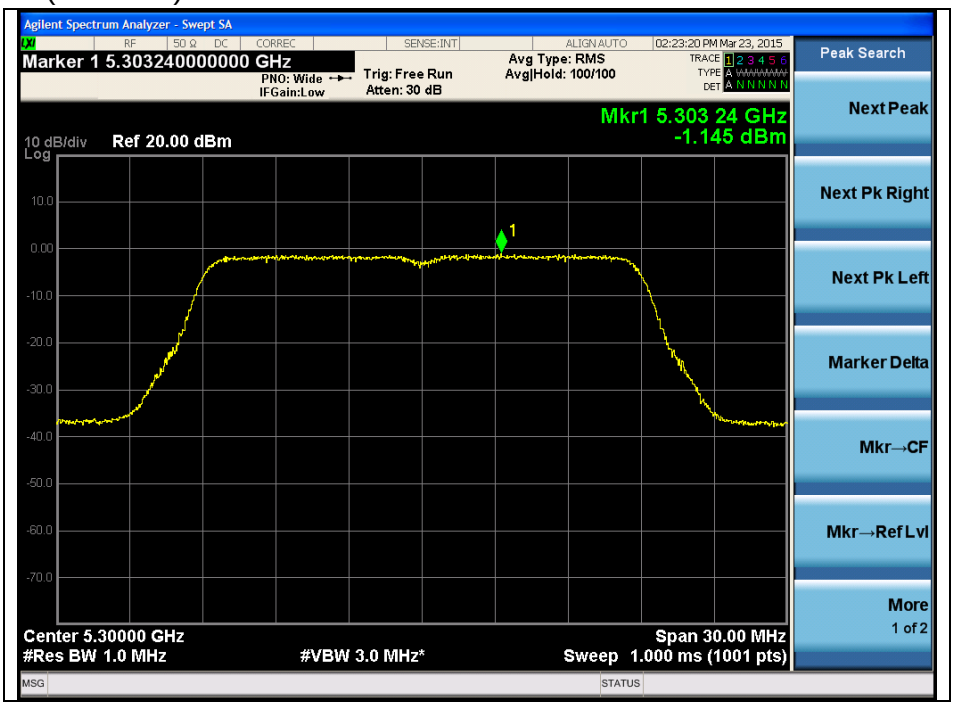


802.11ac_VHT20 (Band 2A)

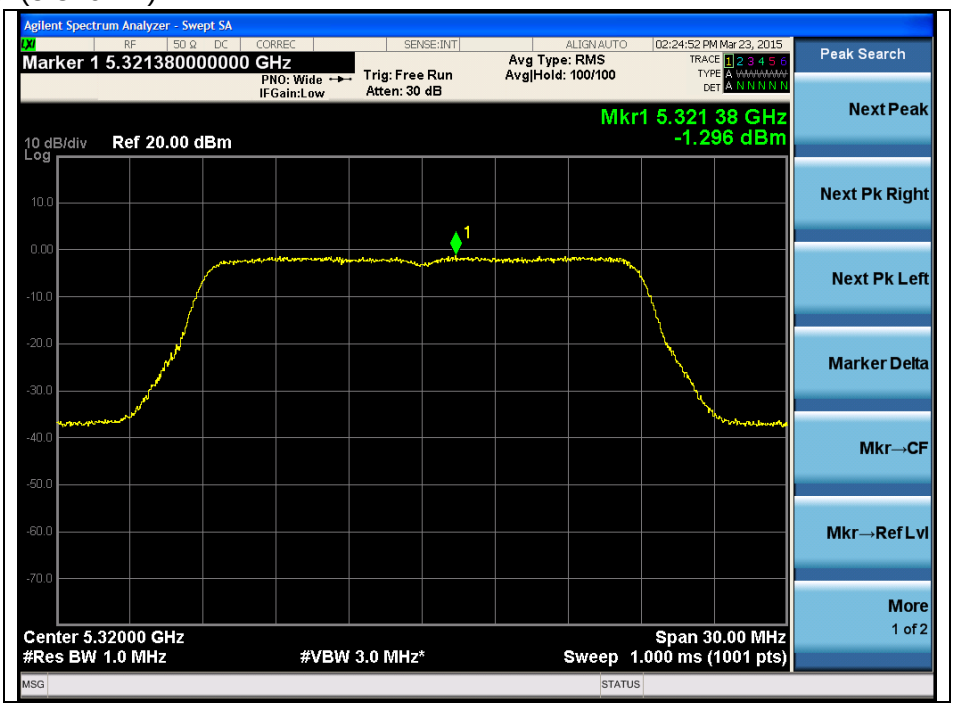
Low Channel (5 260 ㎒)



Middle Channel (5 300 ㎒)

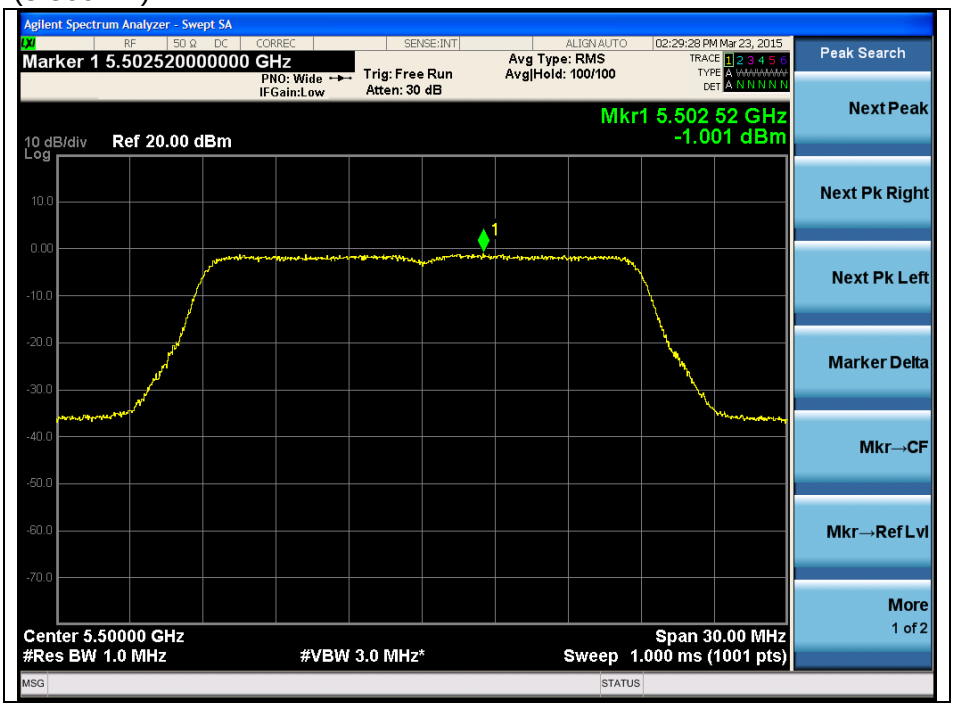


High Channel (5 320 ㎒)

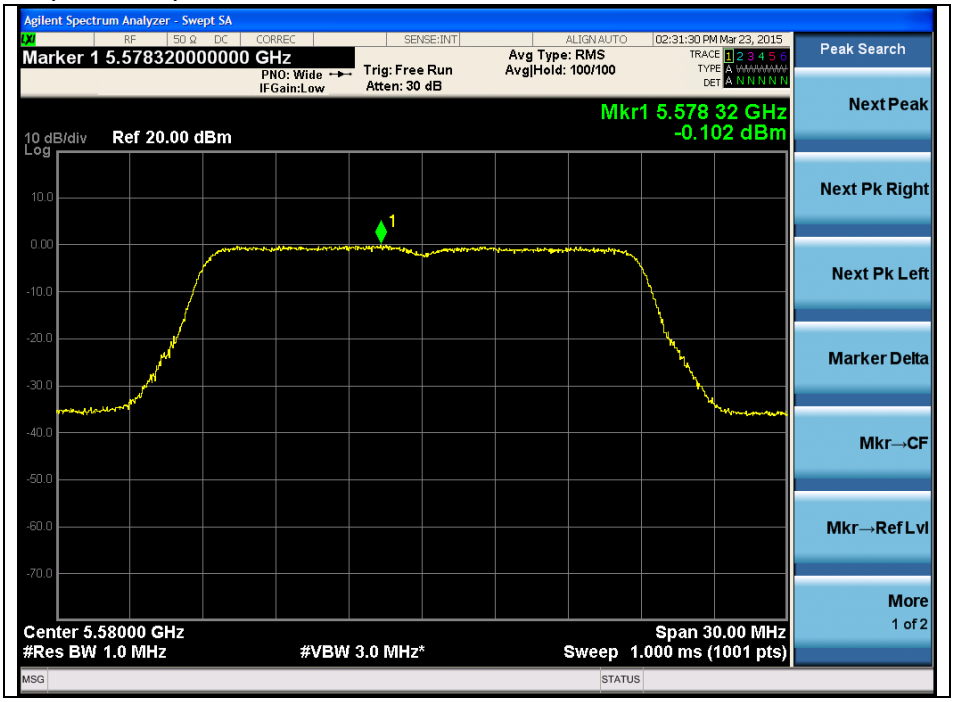


802.11ac_VHT20 (Band 2C)

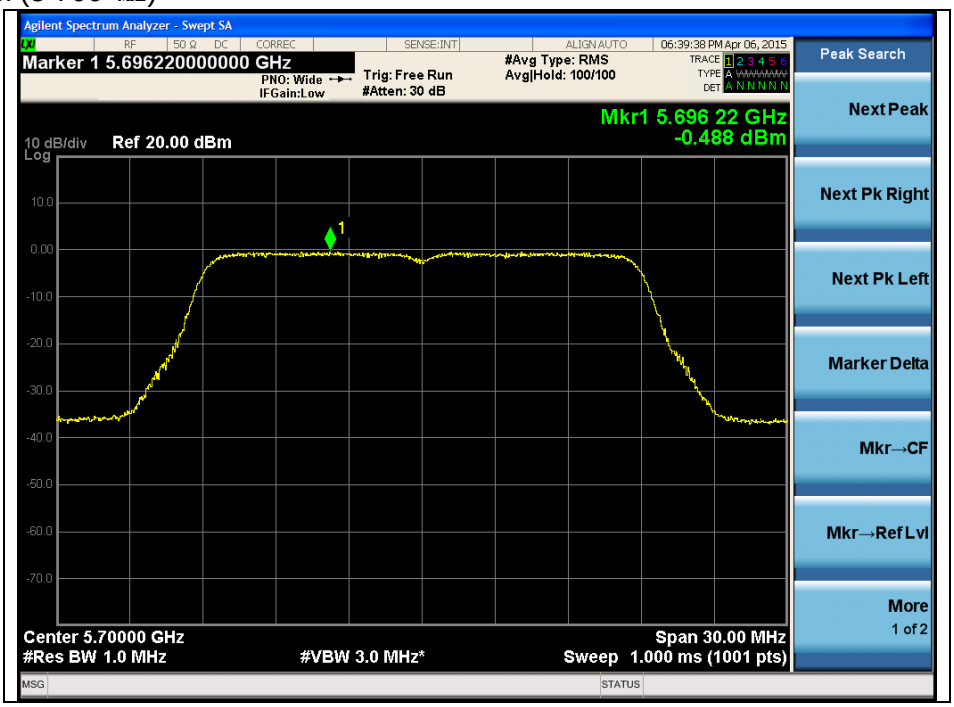
Low Channel (5 500 ㎒)



Middle Channel (5 580 ㎒)

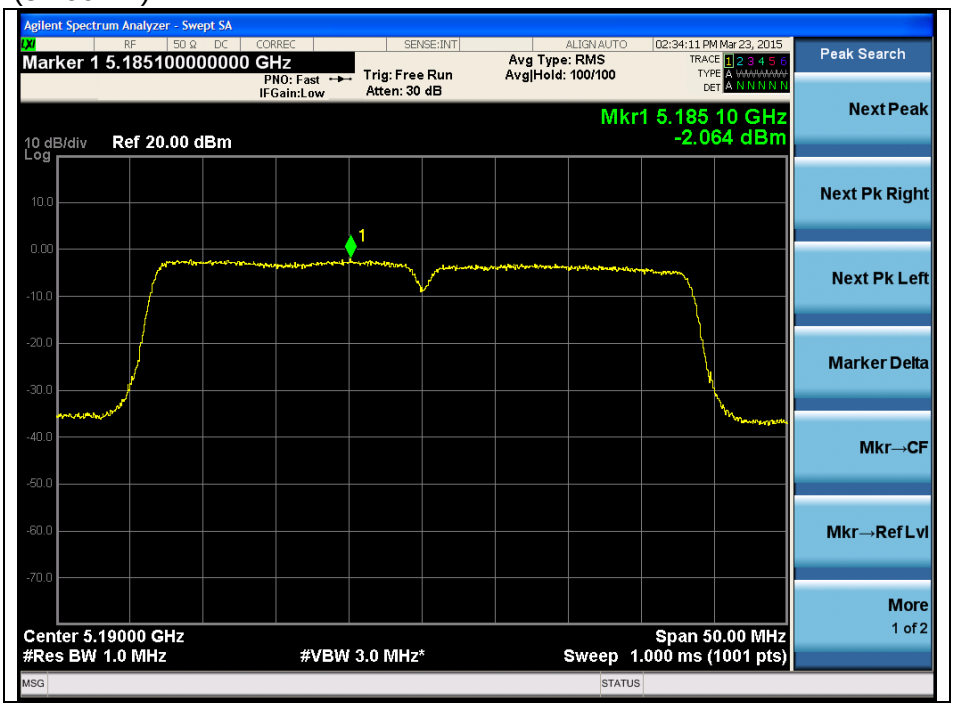


High Channel (5 700 ㎒)

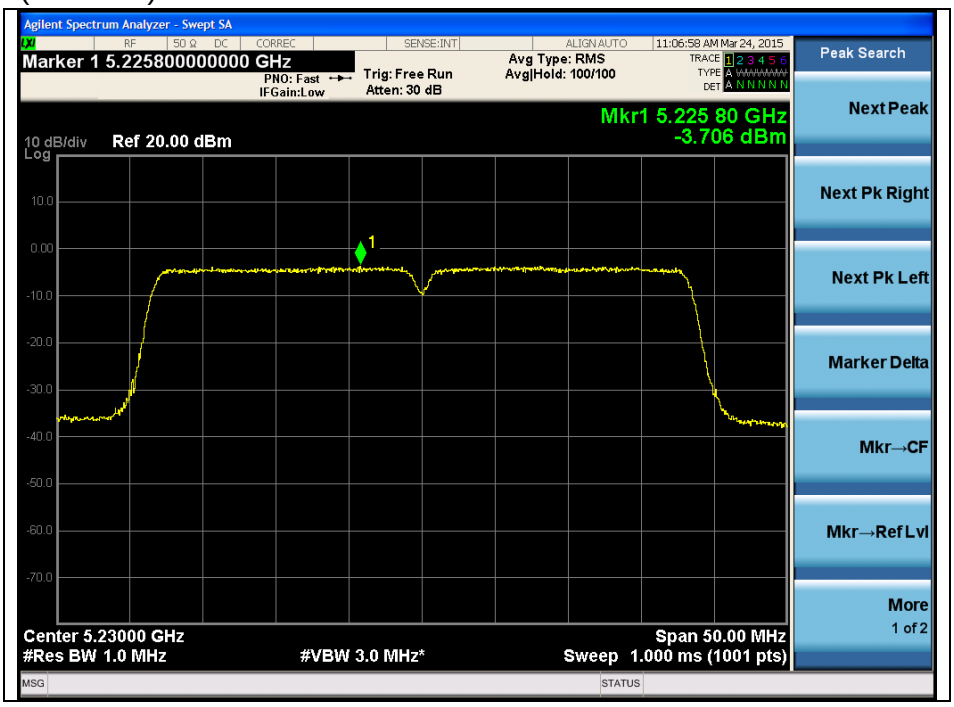


802.11ac_VHT40 (Band 1)

Low Channel (5 190 ㎒)

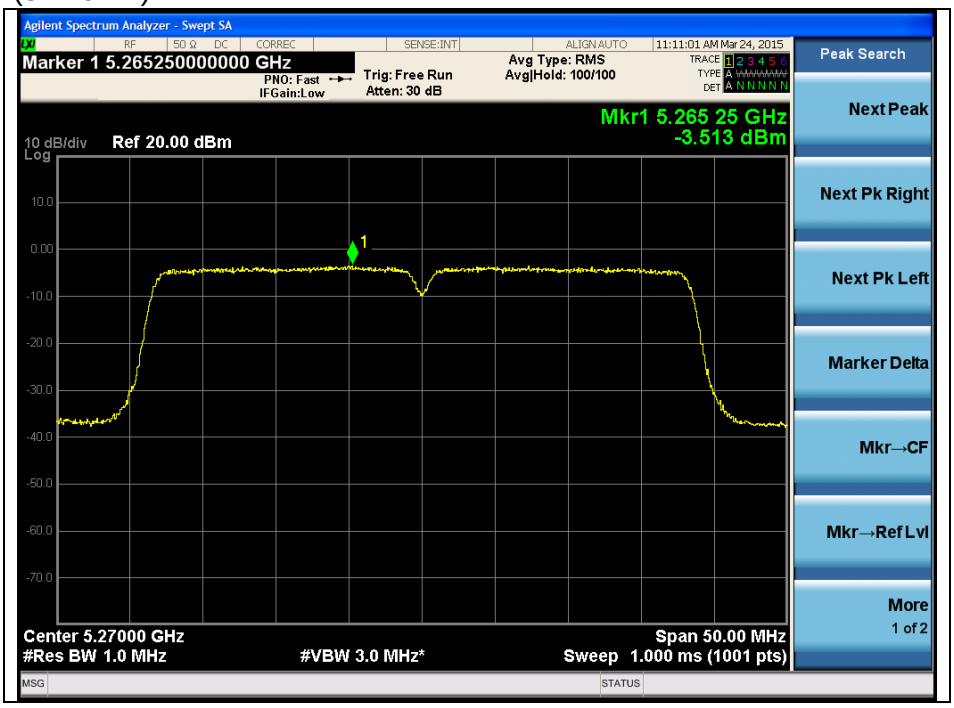


High Channel (5 230 ㎒)

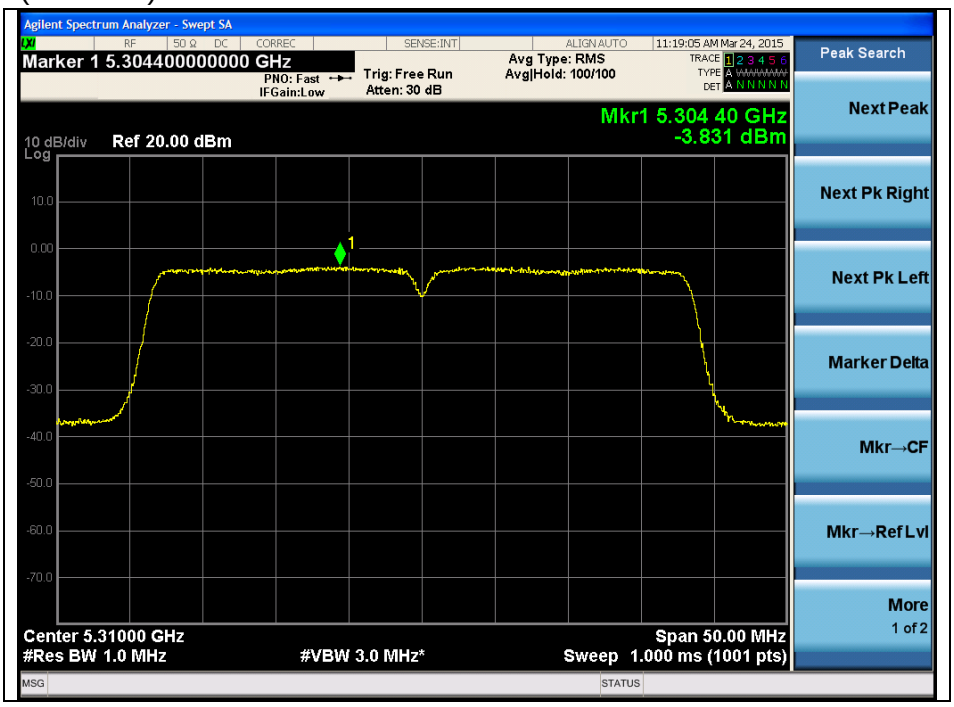


802.11ac_VHT40 (Band 2A)

Low Channel (5 270 ㎒)

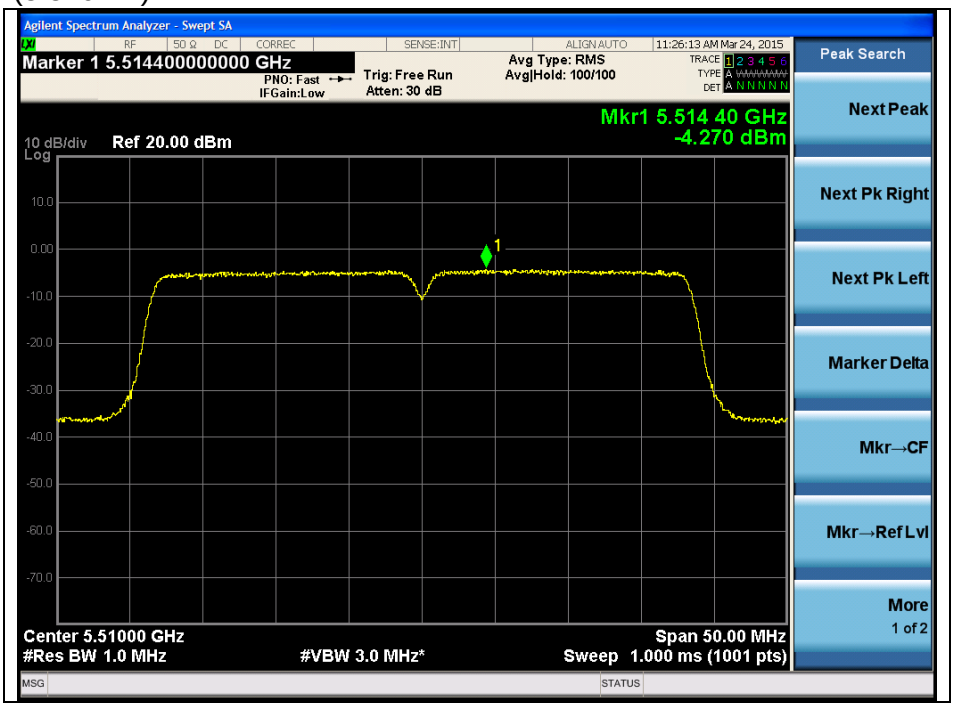


High Channel (5 310 ㎒)

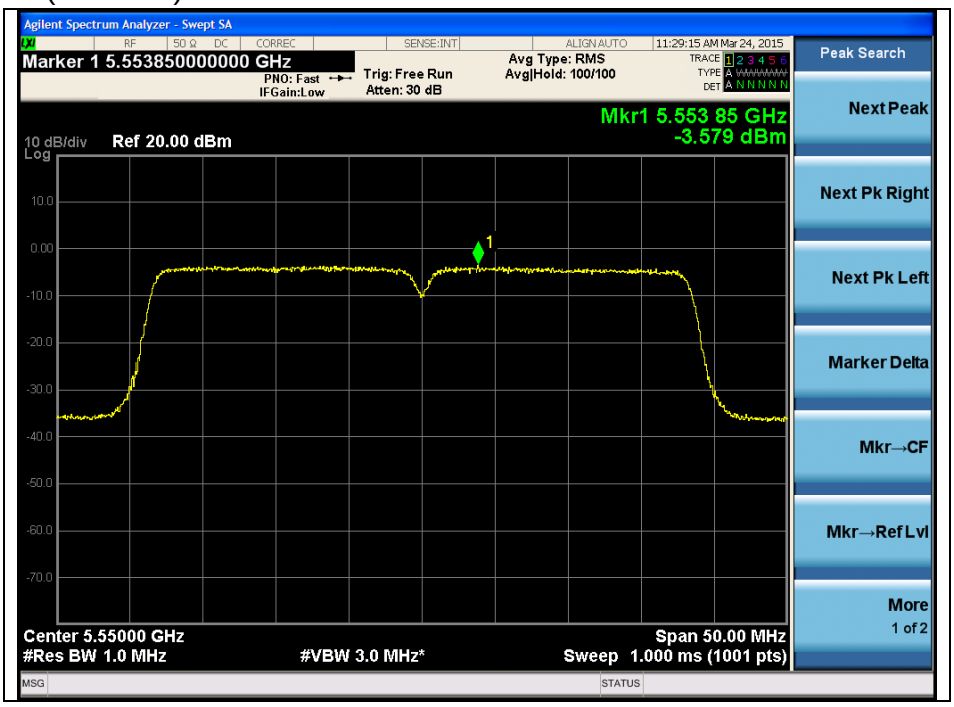


802.11ac_VHT40 (Band 2C)

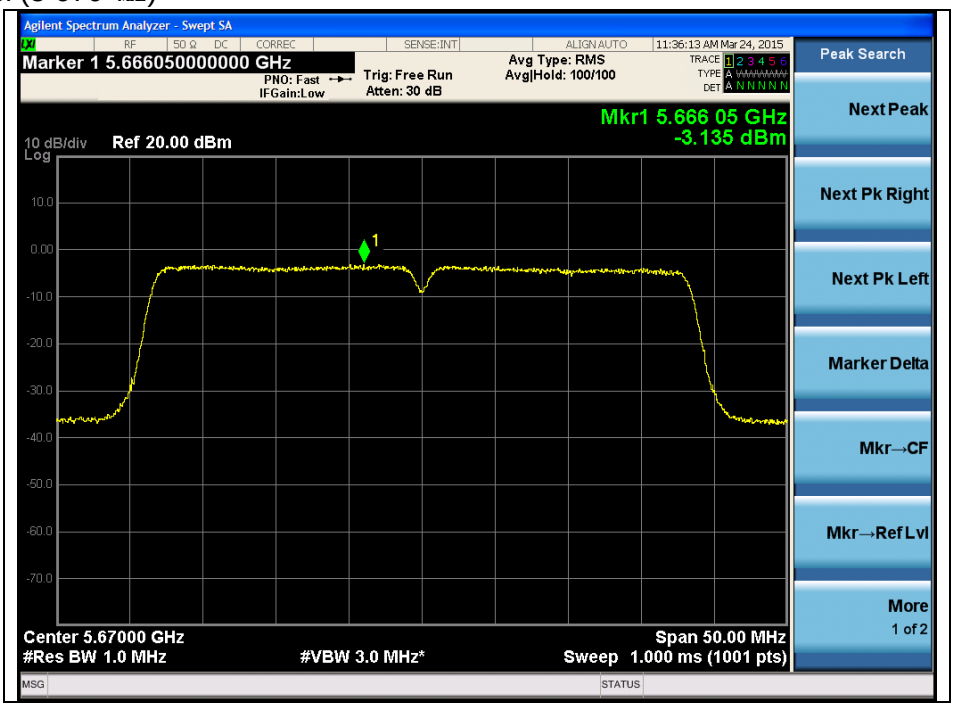
Low Channel (5 510 ㎒)



Middle Channel (5 550 ㎒)

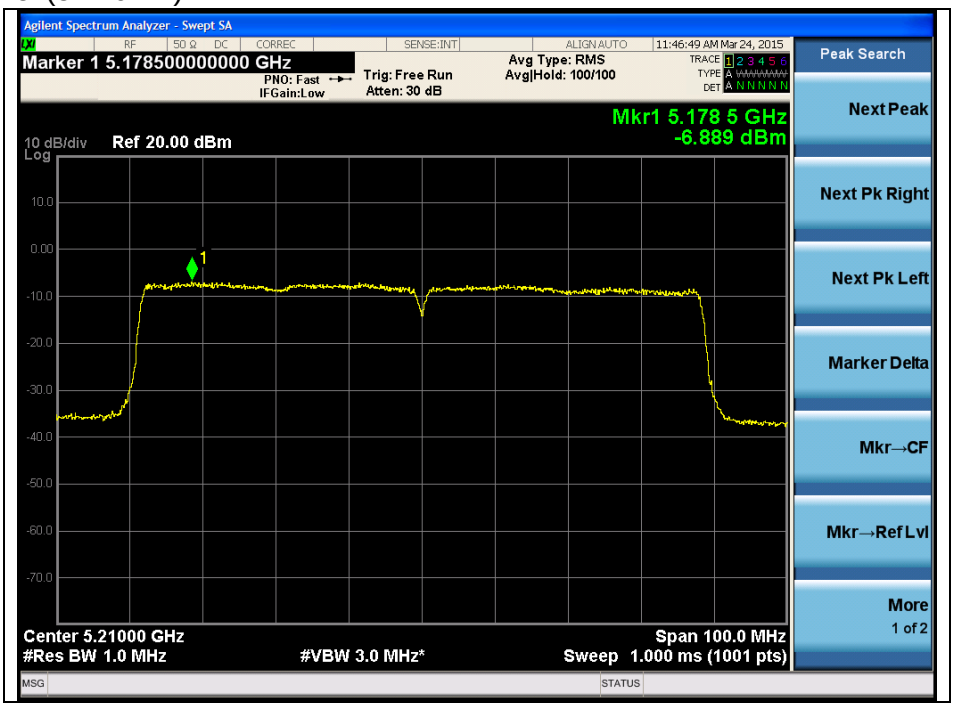


High Channel (5 670 ㎒)



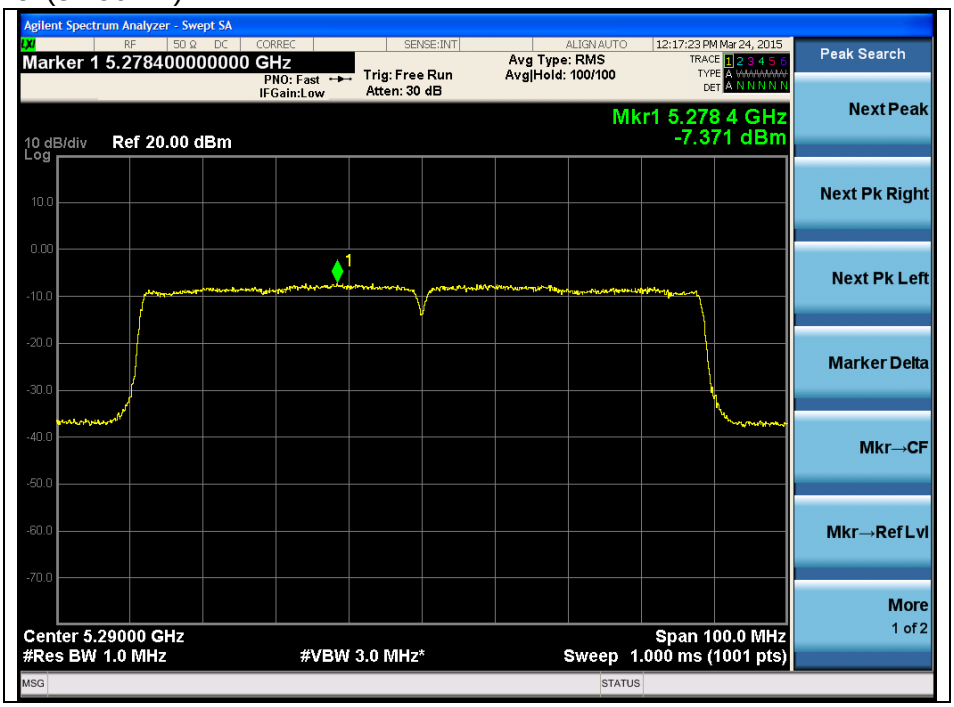
802.11ac_VHT80 (Band 1)

Middle Channel (5 210 ㎒)



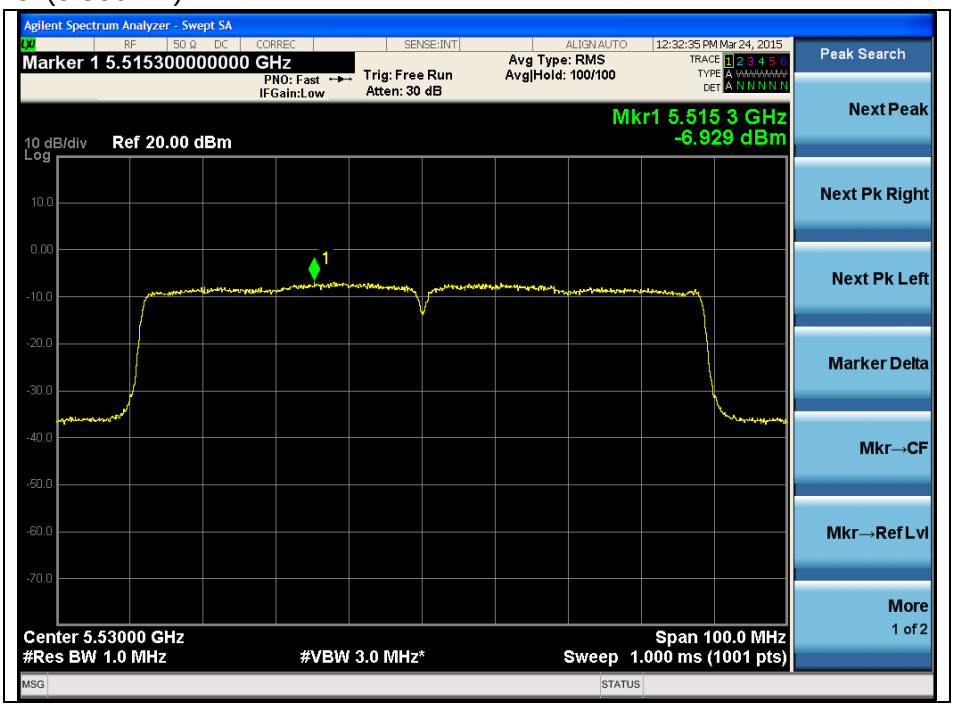
802.11ac_VHT80 (Band 2A)

Middle Channel (5 290 ㎒)



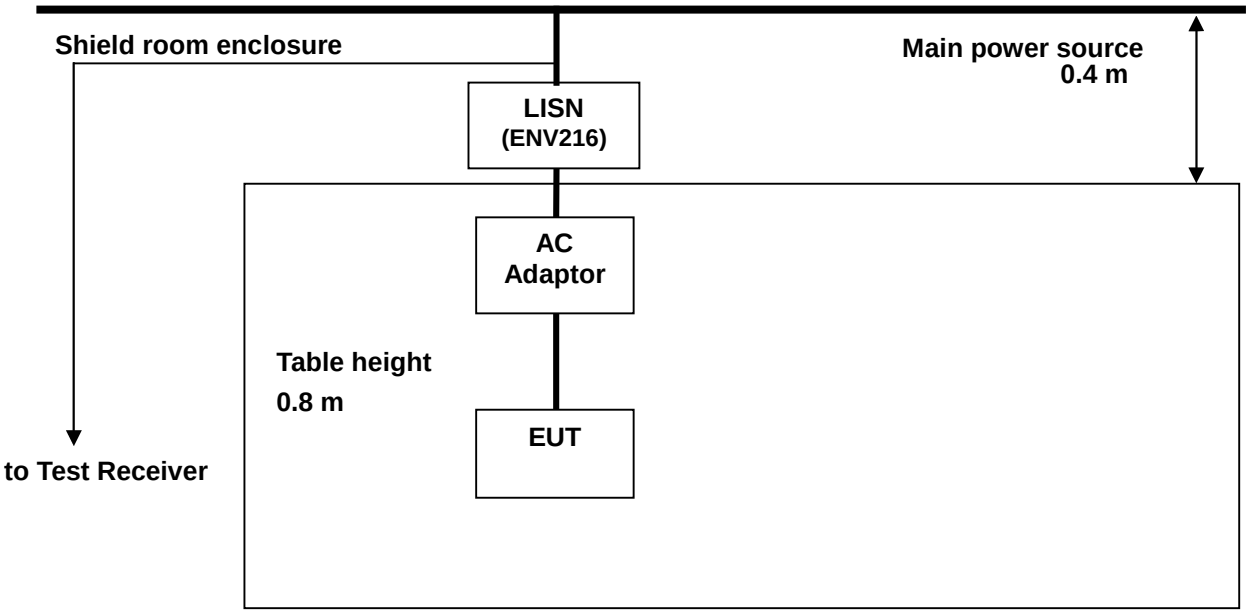
802.11ac_VHT80 (Band 2C)

Middle Channel (5 530 ㎒)



6. Transmitter AC Power Line Conducted Emission

6.1. Test Setup



6.2. Limit

According to §15.207(a) for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 ㎑ to 30 ㎒, shall not exceed the limits in the following table, as measured using a 50 ㎕H /50 ohm line impedance stabilization network(LISN).

Compliance with the provision of this paragraph shall on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower applies at the boundary between the frequency ranges.

Frequency of Emission (㎒)	Conducted limit (dB㎶)	
	Quasi-peak	Average
0.15 – 0.50	66 - 56*	56 - 46*
0.50 – 5.00	56	46
5.00 – 30.0	60	50

* Decreases with the logarithm of the frequency.

6.3. Test Procedures

All data rates and modes were investigated for this test. The full data for the worst case data rate are reported in this section.
AC line conducted emissions from the EUT were measured according to the dictates of ANSI C63.4-2003

1. The test procedure is performed in a 6.5 m × 3.6 m × 3.6 m (L × W × H) shielded room. The EUT along with its peripherals were placed on a 1.0 m (W) × 1.5 m (L) and 0.8 m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.
2. The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room.
3. The excess power cable between the EUT and the LISN was bundled. All connecting cables of EUT were moved to find the maximum emission.

6.4. Test Results

The following table shows the highest levels of conducted emissions on both phase of Hot and Neutral line

Ambient temperature : (23 ± 1) ℃
Relative humidity : 47 % R.H.

Frequency range : 0.15 ㎒ – 30 ㎒
Measured Bandwidth : 9 ㎑

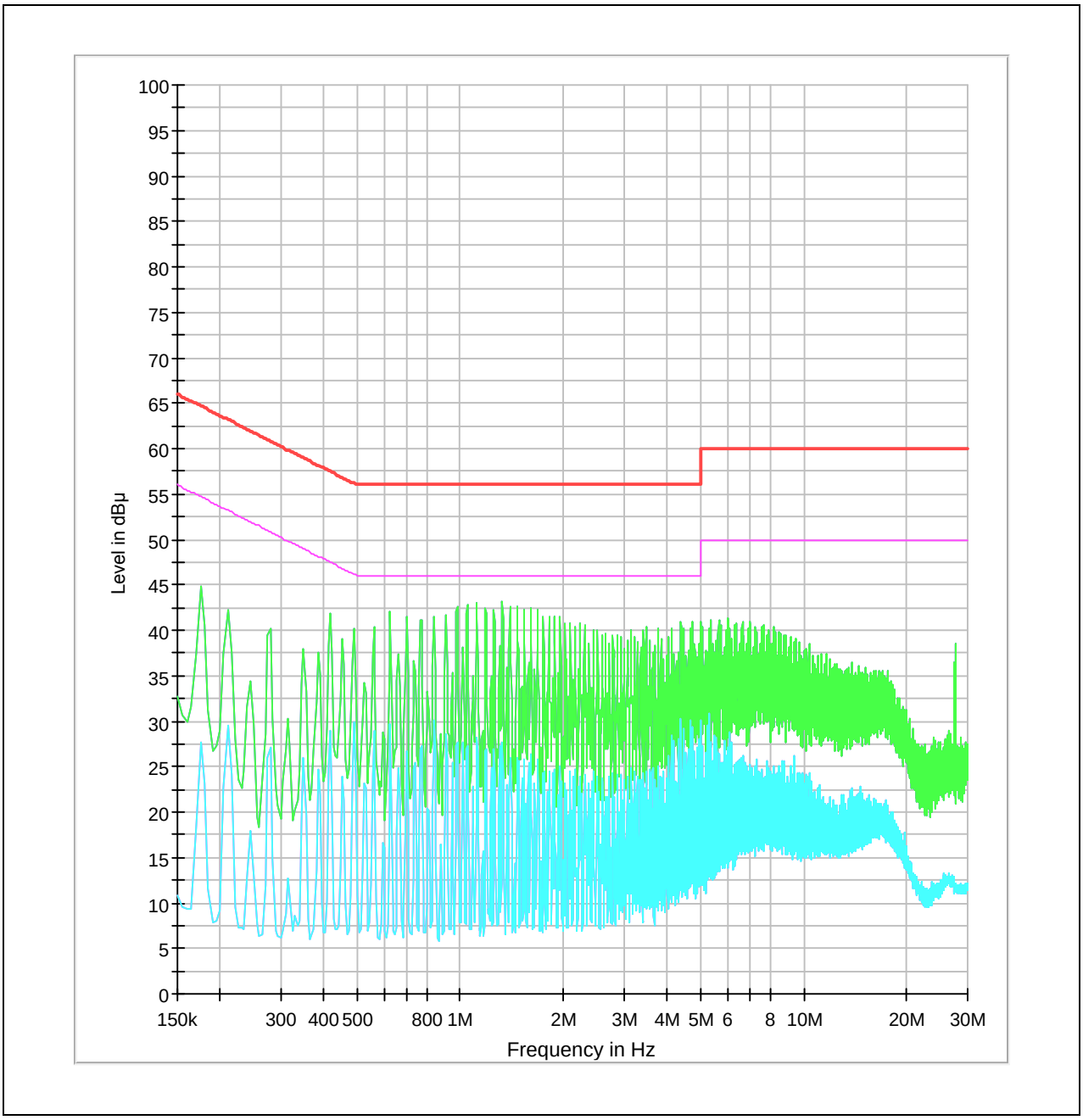
FREQ.	LEVEL(dB㎶)		LINE	LIMIT(dB㎶)		MARGIN(dB)	
(㎒)	Q-Peak	Average		Q-Peak	Average	Q-Peak	Average
0.42	32.60	21.90	H	57.45	47.45	24.85	25.55
1.12	31.20	22.40	H	56.00	46.00	24.80	23.60
1.33	29.90	21.60	H	56.00	46.00	26.10	24.40
4.68	28.80	20.60	H	56.00	46.00	27.20	25.40
6.91	29.30	22.00	H	60.00	50.00	30.70	28.00
27.56	17.30	11.00	H	60.00	50.00	42.70	39.00
0.41	34.00	24.60	N	57.65	47.65	23.65	23.05
0.50	37.50	28.20	N	56.00	46.00	18.50	17.80
1.33	37.10	27.80	N	56.00	46.00	18.90	18.20
4.73	34.30	24.50	N	56.00	46.00	21.70	21.50
7.43	35.70	26.40	N	60.00	50.00	24.30	23.60
11.78	31.50	22.90	N	60.00	50.00	28.50	27.10

Remark;

1. Line (H): Hot, Line (N): Neutral
2. All modes of operation were investigated and the worst-case emissions were reported using 11a Mode 6 Mbps, 52 channel
3. Traces shown in plot mad using a peak detector and average detector
4. The limit for Class B device(s) from 150 ㎑ to 30 ㎒ are specified in Section of the Title 47 CFR.
5. Deviations to the Specifications: None.

Plots of Conducted Power line

Test mode: (Neutral)



Test mode: (Hot)